

ENCYCLOPAEDIA OF INDIAN MEDICINE

VOLUME THREE

Clinical Examination and Diagnostic Methods

Vidyalankara Prof. S.K. Ramachandra Rao

लोकाः समस्ताः
सुखिनो भवन्तु ॥



SRI DHANVANTARI

Dr. V. Parameshvara Charitable Trust
Bangalore

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DHANVANTHRI

DHANVANTARI, drawing from an icon in temple in Tamil Nadu
(Courtesy: Regional and Technical Development Centre, Bangalore)

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VOLUME THREE
CLINICAL EXAMINATION AND DIAGNOSTIC
METHODS

Editor

Vidyalankara PROF. S. K. RAMACHANDRA RAO
President, Ayurveda Academy, Bangalore

WITH ASSISTANCE OF
Dr. S.R. SUDARSHAN



POPULAR PRAKASHAN BOMBAY

On behalf of
Dr. V. PARAMESHWARA CHARITABLE TRUST, Bangalore

ENCYCLOPAEDIA
OF
INDIAN MEDICINE PROJECT

Sponsored by
Dr. V. Parameshvara Charitable Trust
Bangalore

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PREFACE

Indian religions are well known in the world. The philosophical systems that emerged on the Indian soil have also engaged the attention of scholars all over the world. India's achievements in the field of science and technology have also been recognised. However, the fact that India developed a system of medicine, thousands of years ago, has not received wide coverage in the world. And that the system thus developed is still prevalent among the masses of India is likewise not generally known, even to historians of medicine.

There are manifold reasons for this general ignorance of Indian medicine among historians of medicine, medical practitioners outside the country and intelligentsia interested in the problems of health and disease. One is, absence of authoritative and well documented publications in English by Indians, dealing with this branch of medicine. The European indologists who have taken an interest in Indian medicine and have written on the subject do not seem to carry much credibility, because they are alien to the traditional details which are indispensable to the understanding of the spirit, outlook and value of Indian medicine. The literature available on this topic written in the traditional style of Indian languages have proved to be enigmatic to the modern reader. A great need is, therefore, felt for an authentic publication which communicates to the modern mind the traditional wisdom of India concerning medical practice.

The Encyclopaedia of Indian Medicine in six volumes has been planned to fulfil this need. The first volume provides the historical perspective as well as acquaintance with the medical literature in India. The volume has been prepared by Vidyalankara Prof. S.K. Ramachandra Rao, who hails from a family of traditional physicians and is the President of the Ayurveda Academy, Bangalore. Besides being a Sanskrit scholar and well versed in Ayurveda, he has also been a scientific worker, having headed the department of Clinical Psychology at the National Institute of Mental Health and Neurosciences, Bangalore (with which he is still associated as consultant to the Ayurvedic Research Unit).

The volume will be followed in due course by other volumes dealing with basic ideas, methods of clinical investigation, therapeutic procedures, pharmaceutical practices and materia medica of Indian medicine. It is hoped that a comprehensive and factual knowledge of Indian medicine will be available to the world when the series is completed.

Bangalore
June 23, 1987

V. PARAMESIVARA
Chairman

INTRODUCTION

Indigenous medical wisdom in India known as Ayurveda goes back to a hoary past. Even in the early strands of the Vedic corpus belonging to a period several centuries prior to the Christian era, we find references not only to medical practice but to elaborate medical theories. Medical wisdom in India was systematized at a slightly later period, and a remarkably rich medical literature has grown up since those days. Medical practice based on this systematization has continued to our own day, despite the growing popularity of Western medical practice.

Indian medical wisdom has unfortunately been confined to India; and the West is largely ignorant of it. Even in India, the traditional medical practice seems to be losing contact with the system as it was crystallized over two thousand years ago. This is so because much of the early and core medical literature, which is in Sanskrit, is still in manuscripts, hidden away in libraries and private collections; only a few major texts like Charaka's *saṁhita*, Suśruta's *Samhita* and Vāgbhaṭa's *Sangraha* and *Hṛdaya* have been printed and translated into English. The influence of the philosophical systems, especially of Sāṁkhya and Nyāya-Vaiśeṣika, on medical thought in India has not been sufficiently appreciated. The generation of practising physicians who are also scholarly has almost disappeared. Thus the authentic tradition of Indian medical thought has not yet been presented to the modern mind. The medical world at large is almost entirely ignorant of the relevance or the value of Ayurveda.

The present series of volumes constituting *The Encyclopaedia of Indian Medicine* is an attempt to present in a manner that would appeal to the modern mind the theoretical and practical issues as was formulated in Ayurveda several centuries ago. In so doing, we have relied entirely on original texts, which constitute the nucleus of Ayurveda, and on the commentarial literature thereupon, and have attempted to reconstruct the authentic perspective of Ayurveda. The following volumes have been planned and are under preparation:

- Volume I Historical Prespective
- Volume II Conceptual Framework
- Volume III Clinical Examination and Diagnostic Methods
- Volume IV Diseases: Drugs and their Preparations
- Volume V Materia Medica (in two parts)
- Volume VI Folk Medicine

These volumes of the *Encyclopaedia of Indian Medicine* have been planned to appear in two phases, each complete in itself; the first phase comprising of three volumes viz. Volume I: Historical Perspective; Volume II: Conceptual Framework; Volume III: Clinical Examination and Diagnostic Methods and the second phase comprising of volumes dealing with diseases, drugs and their preparations, materia and medica and folk medicine. The first phase is now completed and three volumes that are now being issued represent a comprehensive and self-contained account of the general and fundamental aspects of Ayurveda covering all the theoretical involvements of Ayurvedic practice. Work on the second phase is in progress.

Ayurveda is eminently a rational system of medicine, and differs in this regard with folk medicine, which is largely a matter of community experience and individual intuition. In the earliest of Ayurvedic texts are to be found counsel for proper and adequate examination not only of the disease but of the patient, before treatment is undertaken. Diagnosis (nidana) is an important and indispensable aspect of Ayurveda. It refers to the symptoms of the disease, the disease identification and to the underlying disturbance of the doshas and dhatus. The volume on hand contains a detailed account of several methods of diagnosis, the related conceptual framework, and the rationale of prescribing. The volume also includes details of surgical instruments and operations, although this matter does not fall strictly within the scope of the volume on diagnostic methods and clinical examination. The decision to include this matter here was taken in view of the fact that it may not find a place appropriately in any of the subsequent volumes at present planned.

It has been kept in mind by those who are involved in this Project that the purpose of any encyclopaedia is not only to provide information but to relate it. The entries are designed to introduce the reader to the basic principles guiding Indian medicine in the context of the country's geography, history and culture. Care has been taken to present the details objectively, and in accordance with the traditional framework. We have refrained from taking sides in the controversy regarding the relative merits of the different systems of medicine.

While the present Encyclopaedia is ultimately based on the original texts, commentaries and annotations in Sanskrit, a large number of works on Ayurveda written and published in English and in some of the Indian languages (Hindi, Kannada, Telugu and Tamil) have been consulted, as also many elderly specialists in this system of medicine. We are indebted to all these authors and scholars. But the formulations of the concepts and their applications have uniformly been made in accordance with the original textual tradition

Introduction

disregarding later versions, evaluations and amendments.

The enlightened interest of the eminent cardiologist of Bangalore, Dr. V. Parameshvara has originated this project, and has been sustaining it. Being himself a physician trained in the best traditions of modern medicine, he is interested in the world getting acquainted with the contributions of traditional medicine in India so that there could be greater benefit to mankind.

I am grateful to my son Dr. S.R. Sudarshan, who has helped me in the preparation of this volume, and to my student Prof. M. Sridhara Murthy for preparing the typescript for the press.

Bangalore

S.K. RAMACHANDRA RAO

Editor

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ABBREVIATIONS & MAJOR REFERENCES

AD	Aruṇadatta (Sarvāṅga-sundara)
AHR	Ashtāṅga-hṛdaya (Vāgbhata)
AR	Āyurveda-rasāyana (Hemādri)
AS	Ashtāṅga-saṃgraha (Vāgbhata)
ASM	The Ayurvedic System of Medicine (Nagendranath Sen Gupta)
BP	Bhāva-prakāśa (Bhāva-miśra)
BPN	Bhāva-prakāśa-nighantu
BR	Bhaishajya-ratnāvali
BS	Bhela-saṃhitā (Bhela)
BYT	Brhadyoga-taranginī
CHKP	Chakrapāni-datta on CS
CS	Charaka-saṃhitā
DMA	Digestion and Metabolism in Ayurveda (Dwarakanath)
DN	Dhanvantari-nighaṇṭu
DGV	Dravya-guṇa-vijñāna (P. V. Sarma) in 4 parts
FAM	Fundamentals of Ayurveda Medicine (Bhagawan, Dash)
GN	Gada-nigraha
GNS	Gaṇa-nath Sen
HIM	History of Indian Medicine (Girindranath Mukhopadhyaya) in 3 vol.
IA	Introduction to Ayurveda (Chandrashekhara G. Thakur)
KS	Kāśyapa-saṃhitā
MN	Mādhava-nidāna (Mādhava-Kara)
MPN	Madana-pāla-nighantu
MV	Madana-vinoda
NIS	Nibandha-saṃgraha (Dalhana on SS)
PRM	Paryāya-ratna-mālā
PS	Pratyaksha-sārīram (Gananath Sen)
RJN	Rasa-jala-nidhi (Bhudev Mukhopadhyaya)
RN	Rāja-nighantu
RRS	Rasa-ratna-samucchaya (Nityanātha)
RN	Rāja-vallabha Nighantu (Nārāyaṇa-dāsa-kavirāja)
RV	Rgveda
RVS	Rasa-vaiśeṣika-sūtra (Nāgārjuna)
SAS	Śarṅgadhara-saṃhitā
SDN	Sodhala-nighantu
SDS	Śiva-dāsa-sena
SK	Sāmkhya-kārikā (Īśvara-Krishna)

SKD	Śabda-kalpa-druma
SM	Siddha-mantra
SN	Śaligrāma-nighaṇṭu
SS	Suśruta-samhitā
SSSS	Suśruta-samhitā : A Scientific synopsis (P. Ray et al)
SSM	Śabda-stoma-mahānidhi
STH.	Sthāna
SU.	sūtra
SY	Siddha-yoga (Vṛnda)
VJ	Vaidya-jīvana (Lolamba-rāja)
VRM	Vaidyaka-ratna-mālā
VSS	Vaidyaka-śabda-sindhu
VYK	Vyākhyā-kaumudī
VYMK	Vyākhyā-madhu-kosha
YR	Yoga-ratnākara
YV	Yajur-veda.

ENCYCLOPAEDIA
OF
INDIAN MEDICINE

*Diagnosis, Clinical Examination
and Treatment Procedures
(alphabetically arranged)*

A

Ābhyantara-nidāna: [See INTERNAL CAUSES OF DISEASE]

Abortive Cause of Disease: Called 'Vyabhichārika-nidāna' in Sanskrit, this refers to a subservient or weak factor (durbala), which may by itself be incapable of causing a disease (vyādhi-karaṇa-asamartha); it may initially be experienced only as a distress, but in due course it may be accompanied by the disorder of the doshas (cf. *MK* on *MN*, 1,4). On the other hand, it may help one develop resistance for diseases (vyādhi-kshamatva).

This is one of the four types of causes mentioned by HARICHANDRA in *Upakalpanīyadhāya*, the other three being immediate (saṁnikṛṣṭa), remote (viprakṛṣṭa) and potent (prādhānika). [See NIDĀNA, AETIOLOGY (CLASSIFICATION)].

Aetiology (Classification): I. A classification ascribed to BHATTĀRA-HARICHANDRA recognizes four possible aetiological factors: (1) immediate or proximate (saṁnikṛṣṭa); (2) remote (viprakṛṣṭa); (3) abortive or minor (vyabhichāri); and (4) potent or primary (prādhānika) (*Upakalpanīyādhyāya*, Cf. *MK*, 1,4).

The immediate causes of diseases are illustrated by the instantaneous disturbance of the doshas which produce fever and so on, or by wrong food and conduct in fever; they do not require accumulation (chaya) for a long stretch of time. 'The cause of all diseases is the aggravation of the malas' (*AHr*, nidāna, 1, 12).¹

The remote or distant causes are delayed in their effect; they take a long time to manifest a disease, illustrated by the disturbances of the *doṣhas* owing to seasonal variations. The kapha collected in the winter season may result in the *kapha*-diseases during spring.²

The minor or abortive causes are illustrated by the mild or weak factors which by themselves are not capable of producing any manifestation of the disease.³

The primary or potent causes are illustrated by the direct and quick action of poisons (*vishādin*). They are strong and are therefore sure to produce diseases.

II. Another classification (also ascribed to BHATTĀRA-HARICHANDRA) is three-fold, in accordance with the three causes of disease mentioned in the *CS*: (1) the unwholesome transaction between the sense-organs and the sense-objects (asatmyendriyārtha-saṁyoga), like inadequate application, excessive application or wrong application of eyes to forms, tongue to tastes and so on (ayogātiyoga-mithyāyoga-yuktā rūpa-rasādayah); (2) errors of judgement (prajñāparādha) or improper conduct, unwholesome food, wrong habits, and (3) time, seasonal variations and peculiarities, (pariṇāma), like the aggravation of certain doshas in certain seasons, or in certain parts of the day or night, or in periods of life.

BHATTĀRA-HARICHANDRA includes the effect of unwholesome conduct (karmaphala), that is, wrong actions, being the cause of disease in the third of the preceding groups (adharma-sya cha roga-hetor atraiva antar-bhāvah, *MK*, *ibid*). But *Chkp*. would include this factor under the second, errors of judgement, for sins are always committed owing to the perversion of knowledge, and sins, regardless of their severity, are certain to bring about diseases. The *CS* mentions that diseases are also caused by the anger of Rudra (jvarās tu khalu Maheśvara-kopa-prabhavāh, nidāna, 1; cf. also *chikitsā*, 3, 14 Rudrakopāc cha dārunāt.⁴

III. There is another three-fold classification of causes: (1) disease erupting due to the disturbances of the doshas themselves (dosha-hetu or dosha-prakopaka-hetu), (2) a disease being the cause of other specific diseases (vyādhi-hetu or vyādhi-prakopa-hetu), and (3) both, the doshas and the diseases being the cause (ubhaya-hetu). The first group is illustrated by tastes (such as a liking for sweet foods), conditioned by the seasonal factors, resulting in the accumulation, excitation or pacification of the doshas. The second group refers to the causation of specific diseases, like mud-eating which brings about intestinal infections. It is true that mud-eating, for instance, would also disturb the doshas (cf. CS, chikitsā, 16), but it is considered as a cause of disease, inasmuch as only anaemia (pāṇḍu-roga) is caused by it and no other disease (MK, p.6). The validity of the third group consists in the treatment being directed only for the elimination of the disease but also for the correction of the doshas that have been disturbed. The factors that cause the disturbance of the doshas also result in the disease. And it cannot be said that the disease being the effect of the disturbed doshas, the elimination of the effect (that is, the disease) is secured when the underlying disturbance of the doshas which is the cause, is removed. The two aspects (the doshas and the disease) are to be tackled together. (MK, p.7)

The example given for the third group is the excitation of vāta as well as the occurrence of gout (vāta-rakta) as a result of continuous horse-riding and also by the frequent intake of food that facilitates the development of this disease. The doshas, being disturbed first, get accumulated in the lower limbs and become responsible for the disease, which begins at the lowest extremities.

IV. The two-fold classification, also ascribed to BHATTĀRA-HARICHANDRA, is in terms of productive or causative (utpādaka), and indicative or precipitating (vyañjaka)

factors. The exposure to cold or sweet taste in the cold months (winter) vitiates kapha. But the same kapha (which is collected during the cold month) gets aggravated and becomes manifest in the spring season, owing to the intense heat of the sun. Here the expression 'vyañjaka' is used in the sense of the precipitating cause (preraka) (MK, p.7).⁶

V. Another two-fold classification distinguishes between extraneous (bāhya) and internal (ābhyantara). This classification was probably suggested by TISAṬA, whom MK quotes in this context (from his *Chikitsā-kalikā*, 29-31). Extraneous causes include food, conduct, and the time of season. The citation from TISAṬA, mentioned above, refers to such factors as exercise, seasonal change, fall, fracture of the limbs, night-watching, and intake of several kinds of food which are inappropriate. Internal causes are the three doshas (vāta pitta and kapha), and the seven body constituents (dhātus) which bear the impact of the doshas (hence dūshya). Among the internal causes concerning the doshas, there are the normal (prākṛta) and the abnormal (vaikṛta) aspects. The normal aspect of the doshas is illustrated by the aggravation of kapha in spring, pitta in autumn and vāta in the rainy-season (monsoon). The abnormal aspect is the aggravation of pitta or kapha or vāta in autumn. The normal factors are easily handled during treatment (cf. CS, chikitsā, 3, 42; prākṛtaḥ sukha-sādhyastu).⁷

This corresponds to the well-known classification of diseases into endogenous (nija) and exogenous (āgantū) (CS, vimāna, 6, 3). The former is defined as "due to the disturbances of one's own internal constituents (svadosha-vaishamya-nimittaṁ), while the latter is due to adventitious factors (āgantū-nimittaṁ).

VI. Still another two-fold classification is in terms of the doshas being involved as connected (anubandhya) and connecting (anubandha). The former are primary, while the latter are secondary. The classification

appears to have been implied in the explanation given in the CS that the primary factors are independent, with manifest signs, and that they emerge and subside in characteristic patterns, and also in the identification made in the CS of the connecting factors with secondary diseases (upa-drava). The usefulness of this classification consists in the special attention paid to the primary disease, without, however, adversely prejudicing the secondary diseases during treatment.⁸

VII. The CS (vimāna, 6, 3) suggests other two-fold classifications: (1) curable (sādhya) and incurable (asādhya) from the point of view of prognosis (prabhāva); (2) mild (mṛdu) and severe (dāruṇa), with regard to strength of disease (bala); (3) bodily (śarīrādhi-shthānaṁ, having its foundation in the body) and mental (manodhishthānaṁ, having its foundation in mind) in distinguishing the origin of the disease (adhishthāna); (4) produced in the stomach (āmāśaya-samutthāṁ), and produced in the large intestine (pakvāśaya-samutthāṁ), from the point of view of the āśaya; and (5) caused by the disturbances of the doshas in one's own body (sva-dhātu-vaiśamyā-nimittāṁ) and caused by adventitious and external factors (āgantū-nimittāṁ) in discerning the precipitating causes (nimitta).

Actually, however, the disease is one, for all diseases have in common the fact of suffering. They can be classified for practical purposes only according to some point of view. When so classified they are regarded as many, and thus capable of being enumerated (saṁkhyeya). When however, they are classified, no two diseases are exactly the same, and hence, as a matter of fact, diseases are innumerable (aparisaṁkhyeya, CS, vimāna, 6, 3).⁹

Aetiology (Nidāna): The Sanskrit word nidāna means literally cause, or more particularly, primary cause. It is employed as a

class name for the investigations into the causation of disease, as well as for the ascertainment of the disease (roga-nīśchaya). The CS (nidāna, 1, 3) gives the following as synonyms of nidāna: source, origin, reason or cause (hetu), motive, efficient cause, predisposing condition, mark (nimitta), ground, foundation, support (āyatana) responsible for the effect (kartā), cause, invariable antecedent of effect, origin (kāraṇa) notion of cause, means of action (pratyaṃ), and arousal, symptom, active agent (samutthāna). The common significance of all these terms is causation.

As a class name, it comprehends cause (nidāna), premonitory signs (pūrva-rūpa), manifest symptoms (linga), homologation (upaśaya) and pathogenesis (saṁprāpti), all of which help in understanding the nature of the disease (upalabdhī) (CS, nidāna, 1.6; cf. also vimāna, 8). As the first of these five aspects, nidāna has been simply defined as the cause (cf. CS, ibid., 7, tatra nidānam kāraṇam, ity uktam agre). The idea of cause here includes the proximate factors (saṁnikṛṣṭa) that immediately cause disease (for example, the aggravation of doshas) as well as the remote factors (viprakṛṣṭa) which eventually but not immediately bring about diseases (like seasonal variations) [CHKP. on the above]. The comprehensive character of nidāna is illustrated by the inclusion in it of unrighteous acts (adharma) which bring about diseases in this life or in the next. (cf. CS, vimāna, 3, prāḡ api chā-dharmad-ṛte na rogotpattir abhūt)

Nidāna as the first of the five aspects collectively and generally known as nidāna-pañchaka [See NIDĀNA] refers to the origination of diseases (utpādaka-kāraṇa) (bhāve-lyuṭ) without understanding which treatment would be impossible (cf. MK, yadi nidānam nochyate tadā tad-parivarjanam katham labhyeta?) This has reference to SS, (uttara, 1) where cure is defined as the elimination of the factors that originated the disease

(saṁkshēpatah kriyā-yogo nidāna-parivar janam). The physician's ascertainment of the sources of the disease would help him prescribe a line of treatment that would not only eliminate the symptoms but correct the defects at the source.

Further, an understanding of the cause of the disease would help the physician to prognosticate effectively. If the cause is simple and slight, the disease is easily and quickly treated. But if, on the other hand, the cause is complex and considerable, then the treatment would be difficult and long-drawn.

There are many classifications of the causes of diseases in accordance with their proximity, remoteness, potency, abortive character and such [See AETIOLOGY (CLASSIFICATION)]

According to the CS, the main classification of causes of disease (physical or mental) is in terms of (1) unwholesome (viz. injurious) association of specific sense-organs with their respective objects (asātmayendriyārtha-saṁyoga); (2) errors of judgement (prajñāparādha, buddhi); and (3) time (kāla, or parināma), (CS, sūtra, 1, 11, 20; nidāna, 1, 3).¹⁰

The first of these factors refers to the unwholesomeness (asātmya) of the association (saṁyoga) between the sense-organs (indriya) and their objects (artha). The unwholesomeness or otherwise of the associations is a function of the ease or difficulty with which the organism adapts to the impingement of the stimulus input. Adaptability is strained when the stimulus is all too deficient (ayoga or hīna-yoga) or when it is excessive (ati-yoga), or when it is improper (mithyā-yoga). Looking at objects which are minute, listening to sounds which are almost inaudible, the tongue being starved of tastes, depriving the nose of the normal smells, and the skin not experiencing any pressures at all are instances of deficient stimulus values. Exposure to bright light, loud noise, harsh words, strong smells, oppressive tastes, and

violent pressures illustrates the excessive stimulus value. Looking at ugly or fierce objects, listening to unpleasant or abusive words, tasting articles of food which are unsavoury or unhealthy, smells which are unwholesome and pressures which are irritating are examples of improper stimulus value. These constitute a potent cause for the onset of ailments, both physical and mental, for unadaptability aggravates the doshas.

The second of the factors, errors of judgement, refers to the actions that the individual resorts to while satisfying his needs and transacting with the environment. Such actions are bodily, vocal and mental. The proper employment of one's body, speech and mind leads to health; and it prevents illnesses. This is the theme of the promotive and preventive medicine known as 'sad-vṛtta' in Āyurveda. Errors in bodily behaviour include suppression of the natural urges, satisfaction of these urges by force and before the urgency, exertion beyond one's strength, gymnastics, overindulgence or starving with regard to food, mortification, abstinence, lustful conduct, sudden and violent movements of the limbs, and holding of breath. Errors in speech are illustrated by lying, argumentation, slander, abuse, harsh words, continued silence, inadequate communication, inopportune or excessive or irrelevant talk, and so on. Errors in mental processes are illustrated by fear, sorrow, anger, greed, vanity, jealousy, delusions, prejudices and indifference.

Thus in each of the three modes of action, there could be deficient, excessive, or improper applications, when they are likely to lead to disturbances. Because the normal or the abnormal application is a matter of personal judgement, the factor is described as buddhi meaning resolve, determination (CS sūtra, 1). The inadequate or excessive or improper applications are referred to as errors of judgement (prajñāparādha), for they fail to preserve health or prevent dis-

eases.

The CS (sūtra, 1, 39) merely mentions that excessive or inadequate application of body, mind and speech are called *ati-yoga* and *ayoga* respectively, (literally meaning non-application) but proceeds to cite instances of improper or wrong application (*mithyā-yoga*), as those given above. Thus the error of judgement mainly consists of improper applications of body, mind and speech.¹¹

The third factor refers to time, the variations in the seasons which are cold, hot or rainy bring about changes in the balance of doshas. Even here, the concept of inadequacy, excessive or improper applications is relevant. When the particular season is excessive (fiercely hot in summer, exceedingly cold in winter, and torrential and continuous downpour in the rains) it is *ati-yoga*. When the particular season is only poorly so (like winter not being so cold, summer not being so warm, the rainy season having only few showers) it is *ayoga* or *hīnayoga*. When the seasons are unnatural (like winter being warm, summer being cold and the rainy season having no rains whatever), it is *mithyā-yoga* (CS, sūtra, 11, 41).¹² Contrarily, the proper application (*sama-yoga*) of the body, speech and mind is conducive to health (*ibid.*, *sama-yoga-yuktastu prakṛti-hetavo bhavanti*).

Agni-karma: [See CAUTERY]

Aindra-sattva: A personality type of the patient, characterized by traits distinguishing the legendary hero and ruler of the heavenly denizens, viz Indra. The traits of power and dominance; strength and bravery; nobility; far-sightedness; virtue; indulgence in religious activities, learning; love of pleasure and wealth; protection of dependents are attributed to this personality-type. The type belongs to the *śāttvic* group of people who are healthy, long-lived and happy. [See PERSONALITY OF THE PATIENT]

Aitihiya: [See SYMPTOM]

Analogical reasoning: [See UPAMĀNA]

Ancient Weights and Measures and their metric equipments:

6 aṇus = 1 truṭi = 1/432 mg.
6 truṭi = 1 likshā = 1/72 mg.
6 likshā = 1 yūkā = 1/12 mg.
6 yūkā = 1 raja = 1/2 mg.
6 raja = 1 sarshapa = 3 mg.
6 sarshopa = 1 yava = 20mg
6 yava = 1 guṇjā = 121 mg.
2 guṇjā = 1 nishāpāvaka = 242 mg.
3 guṇjā = 1 malla = 364 mg.
6 guṇjā = 1 māshā = 729 mg.
2 māshā = 1 dharaṇa = 1 g. 458 mg.
2 dharaṇa = 1 śāṇa = 2 g. 916 mg.
2 śāṇa = 1 baṭaka = 5 g. 832 mg.
2 baṭaka = 1 tola = 11 g. 664 mg.
2 tola = 1 śukti = 23 g. 328 mg.
2 śukti = 1 pala = 46 g. 656 mg.
2 pala = 1 prasṛta = 93 g. 312 mg.
2 prasṛta = 1 kuḍava = 186 g. 624 mg.
2 kuḍava = 1 māṇikā = 746 g. 496 mg.
2 māṇikā = 1 prastha = 746 g. 496 mg.
2 prastha = 1 śubha = 1/4 kg. 92 g. 992 mg.
2 śubha = 1 āḍhaka = 2 kg. 985 g. 984 mg.
2 āḍhaka = 1 droṇa = 11 kg. 943 g. 936 mg.
2 droṇa = 1 śūrpa = 23 kg. 887 g. 872 mg.
2 śūrpa = 1 droṇī = 47 kg. 775 g. 744 mg.
4 droṇī = 1 khārī = 191 kg. 102 g. 976 mg.
100 pala = 1 tulā = 4 kg. 665 g. 539 mg.
2000 pala = 1 bhāra = 933 kg. 107 g. 532 mg.

angula = measure equal to 8 barley corns; finger's breadth.

anjali = about 15 to 20 ounces.

Antah-parimārjana: The expression signifies internal and alround cleansing (*pari + marjana*, from *mṛj.* to wash, to clean) of the constitution in order to maintain the doshas (*vāta*, *pitta* and *kapha*), malas (waste-products like sweat, urine and faeces, as well as by-products of bodily metabolism) and

dhātus (the bodily constituents like blood, muscle, bone) in proper, healthy balance. This is a treatment procedure which has also a prophylactic effect, and is therefore recommended as a periodical and hygienic measure.

As a curative measure, it is said to correct the diseases caused by improper food entering into the physical constitution (antah-śarīram anu-praviśya) (CS, sūtra, 11, 55). The line of treatment has two aspects: (i) wholesome cleansing (samśodhana), and (ii) wholesome soothing (of the doshas, samśamana). The former includes many procedures, collectively known as 'pañcha-karma' [See PAÑCHA-KARMA], while the latter relies on drugs, diet and conduct.

The two aspects, together with the elimination of the constitutional cause of disease, are mentioned in CS (vimāna, 7, 30, relating to parasites, kṛmi) as constituting the whole of medical practice (etāvad bhishajā kāryam). The former eliminates the causes of disease, while the latter alleviates the disease. The two together will counteract the aetiology of the disease, viz. the constitutional proclivity for the disease.

The rationale of Indian medicine insists that the elimination of causative factors within the body must precede the alleviation of the specific disease episode, because attempting to cure a disease without cleansing the constitution would be like applying colour to a dirty piece of cloth (maline vastre raṅga ivāphalah). [See KĀYA-CHIKITSĀ, SAMŚAMANA, SAMŚODHANA].

Anupaśaya: That which operates contrarily to upaśaya (exploratory therapy, homologation) [See UPĀŚAYA], which is the fourth phase of the diagnostic process [See NIDĀNA, DIAGNOSIS], prior to final determination of the precise nature and magnitude of the disease. Any drug, diet or regimen that the physician prescribes as antagonistic to the disease, to the cause of the disease, or both the disease

and its cause, in order to ascertain the condition of the doshas in the patient's body is called upaśaya, if it brings about amelioration of the symptoms. It is also called sātmya, inasmuch as its use develops adaptability. If, on the other hand, the drug, diet or regimen so prescribed by the physician only helps to aggravate the condition of the patient, it is anupaśaya or asātmya. In fever which is due to the presence of undigested food in the body, the intake of curds may be immediately felt as beneficial; but it is found to be harmful in due course, and hence it is anupaśaya. In rheumatism (āmavāta), the employment of unction (snehana) is anupaśaya for it aggravates the condition, while it relieves arthritis (sandhi-vāta) and for this condition it is upaśaya.

The CS (nidāna, 4, 15) prescribes that in conditions where the prevailing doshas (the causes of the disease) are hidden, the physician must resort to upaśaya and anupaśaya (gūḍha-liṅgaṁ vyādhim upaśayānupaśayābhyāṁ parīksheta).¹³ (AHR, nidāna, 1, 6 and 7: MN, 1, 8 and 9) [See UPĀŚAYA, SĀTMYA, NIDĀNA; DIAGNOSIS].

Application of leeches: Leeches (jalāyuka, meaning 'whose life is water' or jalauka, meaning 'whose home is water') are employed to extract bad or superfluous blood and thus cure many ailments caused by vitiated blood (like tetanus, migraine, hysteria, abscess, erysipelas, enlargement of liver or spleen, fever, loss of appetite, diseases of head, eyes, and mouth). It is the mildest form of blood-letting, and is used when venesection is not indicated. [See VENESECTIION].

Leeches are aquatic blood-sucking worms of the order *Hirudinea*. One of the genus, *Hirudo* or *Sanguisuga*, is especially employed for blood-letting. The SS (sūtra, 13, 10) recognizes two types of leeches, venomous (savisha) and non-venomous (nirvisha), each of them having six varieties. The

venomous ones are not recommended for therapeutic ends, for their bite causes numbness, tumour, oedema, itching, burning sensation, vomiting, drowsiness, fever, and delirium. The non-venomous ones, whose habitat is said to be Turkistan (yavana), the Pāṇḍya country in South India, the Sahya mountain on the banks of the river Narmadā, and the region called Pautana (around the present-day Mathurā in Uttar Pradesh), are large-bodied (mahāśarīra), strong (balavatya), ready suckers (śiāghrapāyinyah), and voracious (mahāśanah). They are the ones which are useful in blood-letting (SS, op. cit., 13).

The six varieties of the venomous type (to be avoided) are named 'kṛṣṇa' (with head well-defined and thick, and the body colour resembling lamp-black powder or collyrium), 'karbura' (with elongated body like the eel's, with elevated stripes across the abdomen), 'alagardda' (with hairy-body, having thick and round sides, and the mouth being black in colour), 'indrāyudha' (with longitudinal stripes, rainbow-coloured, on the back), 'sāmudrika' (with the body dark-yellow in colour and having spots resembling variegated flowers), and 'gochandana' (with a narrow mouth and a bifurcating tail-like line at the bottom, which looks like the scrotum of a bull). Their origin is said to be decomposed urine and faecal matter of toads and poisonous fish in stagnant water.

The non-venomous varieties are: 'kapila' (the sides having the colour of realgar, 'manah-śilā', back having the colour of green-gram); 'pingala' (slightly red in colour, round in shape, and capable of quick movement); 'śaṅkumukhi' (with the body-colour of blackish red hue like the liver's colour, and having sharp and elongated mouth that sucks blood fast); 'mūshika' (resembling in body-shape and colour the common mouse, and emitting foul smell); 'puṇḍarika-mukhi' (so called because of its mouth resembling an open lotus, and having the body-colour like

that of green-gram); and 'śavarikā' (with a slimy, cold body having impressions resembling lotus flowers, and measuring eighteen fingers-breadth in length). Their origin is said to be decomposed vegetable matter (aquatic plants) and common zoophytes living in clear water (śavālakotha-jāta).

Of them, the last mentioned variety (śavarikā) is employed in veterinary practice, for drawing blood therapeutically in lower animals. The other varieties are employed for human blood-letting. The leeches are gathered with a piece of wet leather, and preserved in a large new earthen pitcher filled with muddy water; blades of grass and leaves of aquatic plants are to be placed inside the pitcher to serve as resting places for the leeches, and pulverized zoophytes (śaivāla), powdered as food for the leeches. The water in the pitcher as well as the food offered must be changed every second or third day; the pitchers also must be changed once a week.

The application is made as follows. The patient is seated, or is made to lie down. The part of the body selected for bleeding is rubbed gently with a composition of loose earth and dry cowdung powder. The leech is taken out of the pitcher, and smeared over with water saturated with mustard seed and pasted turmeric. It is kept for a while in a basin of water, until it regains its normal activity. Its body is covered with a piece of thin and wet linen or with a piece of cotton, and then placed on the part of the patient's body selected for bleeding.

If the leech is disinclined to suck blood, the part of the patient's blood is made attractive to it by a drop of milk or blood on it, or by scarifying it slightly. The sucking of the blood by the leech is indicated by the mouth of the leech assuming the shape of a horse-shoe and the neck becoming raised and arched. While the leech is sucking the blood, it must be covered by a piece of wet linen which is constantly sprinkled with cold water. When the patient feels a sensation of itching and of a

drawn pain in the part on which the leech has been placed, the indication is that sufficient blood has been sucked. The leech is then withdrawn, by sprinkling a small quantity of rock salt (saindhava) on its head.

The leech is then dropped on rice powder, and its mouth is smeared with a composition of oil and common salt. It is caught at its tail-end by the thumb and finger of the left-hand and its back is gently rubbed from the tail-end towards the head with the thumb and finger of the right hand. This will make the leech disgorge the blood that it has sucked. That it has vomited the entire quantity of blood is indicated by its activity (namely, quickly moving about in search of food) when placed in water; otherwise, it would lie languid and inert. It is beneficial for the leech to vomit the entire quantity of sucked blood, for otherwise it would be afflicted by an ailment called 'indra-mada', and would be unfit for use again. The leech is then returned to the pitcher filled with fresh water.

The ulcer caused by the leech on the patient's body is smeared with honey, or washed with cold water, or bound up with a pulp-poultice of astringent, sweet and cooling substances. If there is excessive bleeding, the ulcer is washed with a great quantity of cold water. If the bleeding is insufficient, the ulcer is rubbed with honey and syrup and some more blood drawn out. If the blood sucked by the leech is proper and sufficient, then the ulcer is smeared over with ghee (clarified butter) that has been washed a hundred times (śatadhaūta-ghṛta), or rubbed by a piece of cotton soaked in ghee. The patient feels no burning, the tumour becomes soft, and the pain and redness disappear, when the vitiated blood has been removed from the body (SS, op.cit., 13, 16). [See BLOOD-LETTING].

Āpta: A term literally meaning 'reached', 'overtaken', 'obtained' (āp + kta, prāpta, labdha) and in an extended sense abundant

or full, it is generally employed in the technical sense of 'true' (śatyam, HEMACHANDRA) and 'trustworthy'. It is also employed in the sense of 'apt', 'fit', 'clever', 'competent', one who has 'āpti' has the direct obtainment of the object (sākshād arthasya prāptih).

In the definition given by VĀTSYĀYANA (*Bhāṣya* on *Nyāyasūtra*, 1,1,7) three ideas are involved: (1) that he must have direct knowledge of the object or topic at issue; (2) that he must be motivated by a desire to communicate that knowledge precisely and truthfully; and (3) that he must be a teacher (or speaker, upadeshtā).¹⁴

According to him, the qualification of an apta consists in the obtainment of the object (arthasya aptih), by directly knowing it (sākshātkaranam); and this is what is employed (tayā pravartate) by the āpta. Direct knowledge of an object is in terms of the right ascertainment of the object by employing any of the recognized means of valid knowledge; which are observation, inference, analogy, or reliable testimony. This alone will not make the knower an āpta. He must not only have the desire to communicate what he knows to others, but must have the competence and honesty to communicate it correctly. When these conditions are satisfied, his words become authoritative or reliable.

In this way the popular definition of the āpta is, "a reliable authority is one who tells us about objects exactly as they are" (āptas tu yathārtha-vaktā). This terse definition may be paraphrased as: "he has the correct knowledge of the things which are relevant to our present interest" (prakṛta-vākyārthagochara-yathārtha-jñāna-vān); his knowledge is not vitiated or clouded (abādhita); and his words are capable of arousing in us the verbal knowledge exactly as he himself has it (yarthārtha-śābda-bodha).

It is presupposed that the reliable authority is free from prejudices, emotional influences, and defects of the cognitive instru-

ments. Further, he must be motivated by the welfare of the person to whom the knowledge is to be transmitted, for the definition of 'truth' implies, besides what accords with reality, what is beneficial (*hitam*) and what is most proper (*pathyam*).

The definition of *āpta* given in the CS is thus (*sūtra*, 11, 18 and 19; : "The reliable authorities are entirely free from *rajas* (emotional factors) and *tamas* (ignorance, indolence, resistance), as a result of the strength acquired by austerity and wisdom; for them, knowledge is pure and ever uninterrupted in all the three segments of time (the past, the present and the future because they perceive things exactly as they are, *yathārtha-grāhitvena*; Commentary); they are, in status and ability, competent to guide the folk around them as to what must be done and what not; and their wisdom is of the highest order. Their words are utterly indubitable, for why will they, freed from *rajas* and *tamas* as they are, utter what is not true?"¹⁵

The Commentary on the above passage notes: "People will tend to utter untruth, owing to ignorance, inadequate or faulty knowledge. And even when correct and complete knowledge is there, they may be tempted to utter untruth, under the influence of likes and dislikes. These three (faulty knowledge, likes, dislikes) cease to exist when *rajas* and *tamas* are eliminated, and when *sattva* alone prevails. This characterization of a reliable authority is a natural trait in authorities like the creator (*viz.* author of the *vedic* lore). But so far as authorities in the common world are concerned, their reliability depends upon their correct and complete knowledge of things under question, and also upon the absence of likes and dislikes on their part regarding the very same things.....The three words 'reliable authorities' (*āptāḥ*), 'possessing competence and status to guide people' (*sishtāḥ*), and 'perfectly wise' (*vibuddhāḥ*) signify that they are also celebrities (*prasiddha*) in the com-

munity, and therefore their words are received without a show of doubt."

The CS further spells out that the credible person must be free from four major factors that interfere with correct and complete knowledge: delusions (*bhrama*), carelessness (*pramāda*), fondness for irrelevant talk (*vipralipsā*), and inadequacy of the sense-organs (*karaṇāpātava*).

Despite this insistence on the general credibility of the person, the *Nyāya* system holds that the words of such a person become credible only when they completely accord with reality, as brought out by the "things as they are" (*yathā-bhūtārtha*); or as one who has direct knowledge of a thing (*āpti*) and is guided solely by it (*tayā pravartata iti*; *VAT-SYĀYANA ON NYĀYASŪTRA*, 1, 1, 7). It is interesting that the great *Nyāya* author *VAT-SYĀYANA* explicitly states that being a reliable authority is not confined to the *Vedic* sage (*ṛshi*): a gentleman in lay society who is learned and cultured (*ārya*), or even a barbarian (*mléccha*, *viz.* outside the group where *vedic* culture prevails) may equally well be a reliable authority. He also adds that it is only thus (by directly knowing things, and communicating that knowledge to others) that all the transactions in the world (*vyavahāra*) are carried on. [*See ĀPTOPADEŚA, PRAMĀNA, ŚABDA*]

Aptopadesa: The instruction (*upadeśa*) of the credible person (*āpta*), also called 'verbal testimony' (*śabda*), is one of the instruments: of valid knowledge (*pramāṇa*) accepted by all schools of Indian thought, except the materialist *CHĀRVĀKA* (who accepted only perception, and not even inference as an instrument of knowledge, and the *Vaiśeṣikas* (who while accepting the value of verbal testimony for obtaining valid knowledge include it under inference, and do not regard it as an independent *pramāṇa*). The *Nyāya* school, on which the argument of Indian medicine is based, recognized verbal testimony as the most important one

amongst the four *pramāṇas*, viz. perception (*pratyakṣa*), inference (*anumāna*), analogical reasoning (*upamāna*), and verbal testimony (*śabda* or *āptopadeśa*).

The expression *āptopadeśa* or *āptāgama* signifies the importance of the communication or instruction (*upadeśa*) as given by a trustworthy person. The Sanskrit word *upadeśa* (*dn + di s + ghañ*) means not merely teaching or imparting a piece of knowledge as a part of an educational process (*śikṣhaṇa*), but communicating some knowledge or formula which is undoubtedly beneficial to the person that receives it (*mantra-kathanaṁ*, *hita-kathanaṁ*); and which is otherwise not available to him by any other *pramāṇa*; it is usually employed as synonymous with initiation (*dīkṣhā*). The person who endows the *upadeśa* must, therefore, be presumed to be competent without a doubt, having acquired the knowledge (that he is now imparting) directly, correctly, and comprehensively (as suggested by the word *āpti*). He is described as one who is willing to, and capable of, verbally communicating truth (viz. things as they really are: *yathārthavaktā*. [See *ĀPTA*].

Communication by a credible authority involves in the recipient verbal knowledge (*śabda-bodha*), further involving belief in the words spoken, and the arousal of cognition by verbal indications (*śabdollekhana-pratipatti*, *UDDYOTAKARA*), leading to correct or valid apprehension (*pramā*). The actual instrument of valid knowledge, however, is the collection of thoughts which have been occasioned by such communication (*āptopadeśa-janita-buddhiḥ pramānam it bodhdavyam* *CHKP*).

The insistence that communications only from a competent, credible person (*āpta*) are recognized as instruments of valid knowledge is for the sake of excluding credibility to the words of deluded or deceitful persons (*bhrānta-vilāṁ-bhakayoh vākyasya śabda-pramānatva-vāranāya āpteti*). The test of

credibility (*āptatva*), therefore, is the efficient practical application of the knowledge thus obtained (*prayoga-hetu-bhūta-yathārtha-jñāna-janyatvaṁ*).

The arousal of verbal knowledge (*śabda-bodha*) is dependent upon the expectation, or need, on the part of the recipient (*ākāṅkṣhā*, which will enable him to perceive specific meanings in the words uttered, and to relate them in a relevant sequence), the ability of the words themselves to arouse the expected meanings without involving contradictions (*yogyatā*), the auditory (or visual, when written) proximity, or uninterrupted sequence, of the words uttered (*āsatti* or *sannidhi*), and the understanding of the total import of the sequence (*tātparya-jñāna*).

Verbal knowledge is classified into two categories: (1) relating to objects and events of the transactional world (*dr̥ṣṭārtha*), and (2) relating to matters not ordinarily seen in the transactional world (*adr̥ṣṭārtha*; *Nyāya-sūtra*, 1, 1, 8). The former category becomes the subject-matter of the communications of authorities who are ordinary mortals (*laukika*), while the latter is the theme of the communication of sages (*ṛshi*), who have intuitional and extraordinary powers of knowing things not pertaining to the transactional life without employing any of the ordinary *pramāṇas*. Both are equally valid, the former on the basis of direct perception of the objects which are capable of being perceived, and the latter on the basis of inferential reasoning.

While we do not come across this division of verbal testimony in the *CS*, it may be regarded as implicit in the following statement (*sūtra*, 11, 27): "The Veda is the testimony coming from the credible authorities (viz. it is the means of valid knowledge). And whatever else the investigations have formulated in the nature of disquisitional doctrine of methodological discipline (*śāstra-vāda*) must also be regarded as credible testimony insofar as they do not contradict the import

of the Veda, secure the approval of the enlightened folk in the community, and are motivated by the desire to accomplish the good of humanity".¹⁶

The Commentator notices that the vedic lore is mentioned first as an example of the testimony of absolute credibility, for it is utterly free from the defects of delusion and doubt; and that under the other form of testimony (anyo'pi) are included Āyurveda and the *Smṛti*-texts (like the *Mahābhārata*, *Manu-dharma-śāstra*, etc). It is not claimed that Āyurveda, as a source of valid verbal knowledge, is in perfect accord with the vedic lore, or that it is a continuation, or part, of the vedic lore. It is clear from the statement in the CS that the credibility of Āyurveda is of a nature different from that of the vedic lore, but it corresponds to the latter insofar as it does not militate against the spirit of the Veda (vedārth ādaviparītaḥ).

The credibility of Āyurveda is further derived from the acceptance as such of the principle and practices of Āyurveda by the elite in the society, who are able to perceive in Āyurveda a merit which is lacking in the vedic lore. The merit of Āyurveda consists not in revelations but in the practical application of some principles intuitively grasped and authoritatively communicated, with the intention of conferring benefit on humanity (lokānugraha). While the same intention may be ascribed to the vedic lore also, the testimony is the product of reasoning, or investigation, by competent people (parīkṣakāḥ prāṇītaḥ), unlike the vedic lore, from which the explicit role of reason is altogether excluded.

DALHAṆA, while commenting on the SS (sūtra, 1,16), also points out that verbal testimony may be either the vedic lore or the system formulated by credible people (āgamo vedāḥ, āptānām śāstraṁ vā). He cites a verse in support of his contention:

"Whatever is conclusively proven to be beneficial (to man), here or hereafter, by the

instruments of valid knowledge, which are themselves of proven merit, is 'āgama', viz. communicated by the āptas in an unbroken and authoritative tradition, or it is the organized body of knowledge (śāstra) constructed by the āptas. The āptas are those who comprehend the import of things exactly as they are".¹⁷

Corresponding to the two-fold nature of the calculated benefit, worldly ('here') and spiritual ('hereafter'), the authority also is two-fold: śāstra (science for the good of man here) and āgama (or Veda for the spiritual good of man). Both, however, derive their authority from being the communications of the āptas.

The CS (vimāna, 4,5) looks upon āptopadeśa as the first among the methods to be employed by the clinician to ascertain the nature, source, and gravity of the disease. In the aggregation of the three-fold knowledge (viz. the three-four means of acquiring valid knowledge), initially (pūrvam) knowledge is obtained by the 'āptopadeśa'; then clinical examination (parīkṣhā) is conducted by means of observation (pratyakṣa) and inferential reasoning (anumāna). Unless one is priorly instructed (āptopadeśa), what can there be for him to understand even if he should investigate by observation or inference? Therefore, for one who already knows (jñānavatām, or āptopadeśa-vatām) the clinical examination is two-fold: observation and inference. Or examination is (regarded as) three-fold, if we consider āptopadeśa separately.¹⁸

The value of āptopadeśa is likened to the knowledge that the specialist in jewel-examination would have to acquire before he can distinguish the special merits of the precious stones that are brought to him. If he is untrained, he will not be able precisely to ascertain the especially valuable jewel, although he may nevertheless perceive its merits, for perceptual ability gains by only a background knowledge. Even so, the physi-

cian may observe and make inferences, but without a sound training in the basic principles of diagnosis and acquaintance with the nature and course of diseases he would not be able to identify specific diseases.

Nyāya-sūtra (2,1,68) cites as the examples of the authoritativeness of the words of the 'āptas' the utterance of *mantras* and the prescription of physicians: "mantrāyurveda-prāmāṇyac cha tat-prāmāṇyam āpta-prāmāṇyāt". The aphorism may not subscribe to the view of some of the later Nyāya-writers that Āyurveda is to be regarded as a Veda. In fact, JAYANTA-BHATTA and GAṆGEŚA-UPADHYĀYA deny Vedic status to Āyurveda. The credibility of Āyurveda does not depend upon its being Vedic, but upon its being the prescriptions of people who have (1) direct knowledge of what is prescribed (sākshāt-kṛta-dharmatā), (2) compassion for the living beings (bhūta-daya), and (3) the desire to communicate their knowledge truthfully (yathā-bhūtārtha-chikhyāpayishā) (VĀTSYĀYANA ON NS, 2,1,68). Further, the 'āptas' are competent, and properly motivated, to enlighten the common people about what is to be avoided (hātavyam), what the cause thereof is (hāni-hetuḥ), what is to be attained (adhigama-hetu); for the common people are by themselves incapable of ascertaining these matters and would never get to know about them otherwise (viz. apart from the instructions of the āptas), and would thus not be in a position to exert in order to avoid the harmful or attain the beneficial.

The validity of aptopadeśa is argued on the basis of the inability of the layman to understand what is good for them unless the physician, who is motivated by humanitarian considerations, tells them. But the validity of Āyurveda is different from that of the Veda, inasmuch as the things about which the physician communicates are within the scope of direct experience, even of the layman (dr̥ṣṭārtha), while the matters dealt with in the Veda are beyond ordinary ken

(adr̥ṣṭārtha). VĀTSYĀYANA also points out that much of the transactions of ordinary life is conducted only on the basis of such advice by experts, with the proviso that the experts are directly acquainted with things (about which they are advising), and are motivated by the desire to do good to others, and are desirous of communicating their wisdom to others (ibid.).¹⁹

The point emphasized here is that words communicated do not become automatically authoritative; they carry conviction only when communicated by a person who is recognized as an authority. The validity of words rests on the trustworthiness of the speaker (āpta-prāmāṇya), which is mentioned in the aphorism cited above (*Nyāya-sūtra*, 2,1,68). [See ASPECTS OF EXAMINATION, VALID TESTIMONY].

Ārsha-Sattva: A personality type of the patient, characterized by traits distinguishing a sage (ṛshi): devotion to rituals, austerity, vows undertaken and scriptural knowledge, chastity, hospitality, freedom from arrogance, aversion, attachment, avarice, greed and confusion, eloquence and wisdom. The type belongs to the sāttvic group of people who are generally healthy, long-lived and happy. [See PERSONALITY OF THE PATIENT].

Aspects of Examination: The physician while examining the patient must ascertain the following details with regard to each and every disease: the factors that have excited the diseased condition (prakopana); the origination of the disease from the dosha condition (yoni); the mode of manifestation (utthāna); nature (ātma, viz. gravity, acute condition, and so on); the localization of the disease in one or more parts of the body or in mind (adhishṭhāna); sensation of pain (vedanā); the configuration of symptoms (saṁsthāna); disturbances in the sensory faculties of audition, touch, vision, gustation and olfaction; secondary ailments or complications (upad-

rava); condition of aggravation (vrddhi), continuation (sthāna) and abatement (kshaya); prognosis (udarka); nomenclature of the disease (nāma); concomitant conditions (yoga). These details, as well as the prescriptions and prohibitions in the treatment to be followed, are understood from instructions of credible authorities (āptopadeśa; CS, Vimaṇa, 4,6)²⁸ [See also ĀPTOPADEŚA].

Ashta-Sthāna-Parikshā: Examination of the patient in the eight aspects of his health or ill-health. The Sanskrit expression sthāna literally means site, location, spot; but in this context it signifies the condition that prevails in a particular spot, site, or organ. The eight conditions that are examined pertain to (1) the pulse (nāḍī); (2) urine (mūtra) (3) faeces (mala), (4) tongue (jihvā), (5) voice and sounds (śabda) (6) touch or palpation (sparśa), (7) sight (dṛk), and (8) general appearance (ākṛti) (cf. YR, 35).

The eight conditions are said to provide a comprehensive picture of the patient's health or ill-health in terms of the normalcy or abnormality of the three doshas, severally, in pairs, or collectively. [See EIGHT-FOLD EXAMINATION].

Āsura-Sattva: A personality type of the patient, characterized by traits distinguishing the legendary evil spirits (asurā): bravery, fierce temperament, envy, conceit, vacillation between fear and mercy, readiness to grow violent, selfishness, and stealth. The type belongs to the rājasic group of people, who are generally irascible in temperament, and prone to many illnesses. [See PERSONALITY OF THE PATIENT].

Ascertainment of Life-Span: It is recommended that the physician must ascertain the life-span (āyuh) of the patient, before he commences the treatment, for the nature of the treatment, the length of the treatment and severity of the drugs depend upon the

life-span that the patient has at his disposal. There are prognostic indications which help the physician ascertain whether the life-span of the patient justifies his efforts in treating the disease.

The patient whose sight is calm, audition clear and face is tranquil and who can correctly apprehend tastes and smells may be recognized as one whose diseases can be cured, and who will live reasonably long. If the patient's hands and feet are warm, if his body burns (dāha) but slightly, and if his tongue is smooth and soft, his life-span may be understood to be reasonably long. Similar is the case of the patient whose fever is devoid of sweat, who breathes through his nostrils, whose throat is not blocked by phlegm; who sleeps easily, whose sense-organs are efficient and natural, whose body is capable of exertion, and who can articulate distinctly (YR, 1,132-136).

If there are sudden and severe changes in the patient's sense-faculties, mental processes or general conduct, the life-span may be viewed as limited. The physician, by observing them, may prognosticate the extent of the life-span that is still available for the patient (CS, sūtra, 30,25). [See also ĀYUH-PARIKSHĀ].

Ayuh-Parikshā: Examination of life-span (āyus) of the patient is said to facilitate the physician's decision about whether the disease is curable or incurable, and in deciding upon the nature of the treatment and the dosage of the drugs.

The expression āyus (derived from the root eti which means moves, goes, gacchati) is defined as the distinctive association between the body and the vital force (prāṇa), indicated by the vital current rooted in the navel rising up to the heart and throat, going out and quickly returning (śarīra-prāṇayor evaṁ samyogāt āyuh, SaS). It is described as the peculiar conjunction of body, sense-organs, mind and soul (śarīrendriya-sattvātma-saṁyoga), which preserves the

psychophysical complex from degeneration and decay (dhāri), and enlivens the complex (jīvitam); it is an enduring and inalienable ground for all bodily and mental functions (nityaga, anubandha; CS, sūtra, 1,42). It is further described as a continuum of consciousness (chetanānuvṛtti, CS, sūtra, 30,22). It is spoken of as life or as life-span.

Normally, the life-span of the human being is one hundred years; but the constitution, the diseases of the body and mind, the aging process, the habits which are integrative or degenerative determine the life-span (curtailing it or prolonging it). In Āyurveda, the extent of life-span of the patient is ascertained by examining his body (deha, physique), his constitution (prakṛti) and some significant symptoms (lakṣhaṇa; CS, sūtra, 30,25; deha-prakṛti-lakṣhaṇam adhikṛtya chopadishtam āyushah pramāṇam āyurvede). [See ASCERTAINMENT OF LIFE-SPAN].

B

Bad Prognosis: Indications pertaining to the incurability of the disease and the approaching end are called arishta. Any change, which is sudden and abnormal, in the body (śārīra) or conduct (śīla) of the patient, is briefly an arishta (YR, 1,1413; cf. also CS, sūtra, 30,25).

Among such indications are listed: the patient hears sounds which are not there, hears wrongly the words spoken or does not hear when he is spoken to; he apprehends cold as warm, and warmth to be cold; his body is exceedingly hot, or shivers with extreme chill; he does not know when a blow has been administered to him, or feels as if he

is beaten even when no one touches him; he imagines that his body is covered with dirt; his complexion changes markedly, and the body develops scars without a reason; black bees hover about him even when he has bathed and applied to his body fine sandal paste.

The patient perceives tastes differently in his mouth (viz. sweet things as bitter or pungent, astringent as sweet, and so on) or does not perceive tastes at all; he smells fragrant things as abnoxious, and four odour as sweet smelling, even when there is no disorder in his nose; he smells differently the odour that emanates from the wick of a lamp when the light is just put out.

He sees the sun burning bright during night or finds the sun cool like moonlight during daytime; he sees the lustrous stars in daylight; he sees dense and dark clouds, and lightning in the sky that is clear and bright; he sees breeze as if it has acquired a concrete shape in mid-space.

He sees the earth as covered with smoke or snow; he perceives the directions as on fire; he sees the dry earth as flooded with water, smooth earth as rough with lines or plain earth as studded with gold nuggets.

He fails to perceive the stars in the sky that others can see; he can not perceive the Arundhatī-star, the pole-star, or the milky way.

He does not see his reflection in the mirror or in clear water, or his shadow on the ground in sunlight; he fails to perceive one of his limbs when it is there, or sees it as deformed even when it is not so; he finds his reflection or shadow resembling that of an animal (crow, dog etc.).

He suddenly loses his natural sense of shame or fear or his valour, memory or bodily lustre that was there formerly; he suddenly becomes shy or frightened when he has all along been free from these traits.

His lower lip hangs down and his upper lip is likewise drawn up, or both lips become black in colour and rounded in shape.

His teeth acquire red or black hue or fall off without cause; his tongue becomes black, heavily coated, swollen, or extremely coarse; his nose suddenly becomes crooked, wide or dry; there is loud sound when he breathes; he feels that his nose is broken or is falling off.

His eyes become small and unequal in size; they lose their capacity to move; they become devoid of unctuousness and appear to slide down; his eyebrows come together and bend; his eyelashes quiver; his sight is settled rigidly.

He is unable to swallow the food that is in his mouth; he is unable to hold his head which inclines to a side; he becomes unconscious; he loses consciousness when he is being propped up.

His sleep is interrupted or his wakefulness is constant; he forgets what to say when he has begun to speak; he licks his upper lip, and has frequent eructations; he talks with dead folk or disembodied spirits; his eyes, nostrils or other cavities or roots of hair exude blood without apparent reason; or his strength declines and muscles degenerate; and his disorders aggravate even when proper treatment is being given.

The above symptoms may occur severally, in patterns, or collectively. But they all indicate that the treatment will be ineffective and in vain, for the vital principle of the patient is drawing near its end.

The patient whose end is imminent may have the following symptoms : his mouth dries up; his lips are blackened; his teeth acquire black colour; his nose becomes cold to touch; his eyes become red, and his sight assumes vacant stare; his limbs (viz. arms and legs) get suddenly crooked and are thrown about; his ears are deprived of the power of hearing even though the words are shouted into his ear; his breath becomes cool; or he exhales warm breath frequently; he shivers with extreme chill; the surrounding becomes empty and meaningless for him (YR, 1, 139-159).

When the patient's face assumes a crimson hue and his tongue becomes black, contracted and coarse to touch, when his forehead exudes cold and unctuous sweat when he is shivering with chill, when the phlegm that is collected in his throat will not descend to the region below, when he is attacked by high fever during night and his body becomes cold during daytime, when his face loses its normal lustre, when his pulse becomes gross and subtle alternately, the indication is that death is imminent (ibid., 165-167).

If the patient fails to perceive his own eyebrows when he looks into the mirror, he will die within nine days; if he cannot see his own eyes in the reflection, or his ears, or his nose, or his tongue, he will die within five, or seven, or three days or a day respectively (ibid., 1,163). If the patient becomes fat or emaciated owing to no particular cause, or undergoes a marked change for which no reason can be ascribed, it means that he will die within six months (ibid., 164).

Bahih-Parimarjana: External cleansing as one of the methods of treatment [See THE THREE METHODS OF TREATMENT] involves external treatment, illustrated by massage (unmardana), fomentation (parisheka), oleation (CS, sūtra, 11,55). Included in this group are all methods of oleation, sudation, baths, medicated gargles, application of pastes and powders, lubrication (abhyāṅga), sweating (sveda).

Bāhya-Nidāna: [See EXTERNAL CAUSES OF DISEASE].

Bandages: There is an elaborate description of the nature, functions and varieties of bandages (bandhana, vraṇa-bandhana, paṭṭa) in SS (sūtra, 18,16-20). Bandages differ according to the material used (cloth from vegetable fibres, cotton, flax, silk, leather, inner bark of tree, tendrils of creepers, cane, split bam-

boo, jute, plates of metals, etc) and accord-ings to the parts of the body to which they need to be applied. There is a prescription that bandages must be decided after ascer-taining the patient's disease (vyādhi), the time when the bandages are to be applied (kāla) and the specific function which the bandage is expected to serve (upayoga).

Fourteen kinds of bandages are enumer-ated, their names being suggested mostly by the forms which they assume:

(1) Kośa, sheath, case, hollow-cylinder, to be used for the joints of thumb and fingers.

(2) Dama, large, to be used on the part of the body which is painful, for it relieves pain.

(3) Svastika, pair of rotating crosses with arms, to be used round the joints, swollen regions, space between the eye-brows, palm of the hand, ears.

(4) Anuvellita, encircling, to be used when cuts are deep and large, or when the ribs have been broken.

(5) Pratoli, broad, to be used on the neck and the penis.

(6) Maṇḍala, circular, to be used on arms, sides, abdomen, thighs.

(7) Sthagikā, stabiliser, to be used over the thumbs, fingers, penis and the scrotum, its purpose being to keep the parts firm, and to support the splint and also the medicinal preparations applied on the parts.

(8) Yamaka (double bandage, pair of ban-dages) to be used on two ulcers at once.

(9) Khaṭvā (bedstead, cot) having four units, to be used on temples, cheeks and lower jaw.

(10) Chīna (banner) to be used on the eye.

(11) Vibandha, crisscross bandaging in various ways at many places with six knots.

(12) Vitāna (canopy, large), to be used on the head.

(13) Go-phana (sling, concave shape) to be used on the chin, lips, nose, shoulders and pelvis.

(14) Pañchāṅgi (five-unit) to be used on parts above the clavicle. (SS, op.cit., 18-19).

Bandages could be (1) tight (gādha), not painful but causing discomfort (pīdayan-arujo), to be used on the buttocks, sides of the abdomen, groin, chest or head; (2) proper or even (sama), that is, neither tight nor loose, to be used on extremities, face, ears, neck, penis, scrotum, back, sides or abdomen; or (3) loose (śithila), namely, relaxed (socchvāsa), to be used on the eyes and the joints (SS, op.cit., 21-23).

Body Constitution: An important considera-tion in diagnosis, treatment, and prognosis is the body constitution (deha-prakṛti) of the patient. Two aspects thereof come in for detailed mention in the texts, CS and SS, the dosha and the bhūta. The human body is looked upon as an organization of the three doshas (vāta, pitta and kapha) in varying proportions and differing interaction. The physician needs to know what the particular organization of the dohas the patient's con-stitution illustrates. The human body is again composed of the five primary forms of matter (bhūtas: earth, water, fire, air, and ākāśa), which also vary in their proportions and dif-fer in their interaction. Knowledge concern-ing this aspect is also valuable for physician.

1. The expression prakṛti is taken by CS (vimāna, 1,21,1) in the sense of innate nature (svabhāva, inborn and not acquired during the course of life, ЧКР.), or constitutional predisposition. Hypothetically, it is the state of balance or equipoise (sāmyāvasthā) of the three primary factors of existence (which are the guṇas: sattva, rajas and tamas) rep-resented in the human constitution by the three doshas (vāta, pitta and kapha). When the three doshas are in a state of balance, they help maintain normal health (te prakṛti-bhūtāh śarīropakāraḥ bhavanti), whereas, if disturbed they trouble the body with a vari-ety of ills (vikṛtim āpannās tu khalu nānāvidhair vikārais śarīram upatāpayanti; CS, op.cit., 5).

The CS (vimāna, 6,13) rejects the view

that there are no living beings in whom the three doshas are in perfect balance, for the very concept of health, according to him, involves the balance of the three doshas, and the very purpose of medical treatment is to restore the balance that has been lost (prakṛtiś cā-rogyam, ārogyārthā cha bhesajya-pravṛttiḥ, sā cheshtā-rupā, tasmāt santi sama-vāta-pitta-śleshmāṇah). There are no healthy body-constitutions, therefore, which are exclusively or predominantly characterized by one or the other of the doshas.

However, CS (op.cit.) concedes that one or the other of the three doshas may be in the ascendent in some of the constitutions so that we may speak of constitutions which are 'vātala' (predominantly vāta), 'pittala' (predominantly pitta) and 'śleshmala' (predominantly śleshman or kapha). But these are departures from natural balance, and hence they illustrate ill-health (aprakṛtisthās tu te jñeyāḥ). The healthy constitution is one in which the three doshas are balanced.

SS, on the other hand, recognizes the possibility of any one or two of the three doshas or all three of them being on the ascendent even in normal, healthy body-constitutions (śārīra, 4,64-79). Hence seven constitutions are enumerated: vāta, pitta, kapha, vāta-pitta, vāta-kapha, kapha-pitta and tridosha.

(1) Individuals whose constitution is predominantly vāta (vāta-prakṛti) are generally thin, emaciated, with coarse skin, and voice which is low, unsteady and slow; their food habits and movements are light and unsteady; their bones and joints infirm, veins and cavities in profusion; their hair, nails, hands and feet are hard; when moving about, their bones and joints make sound; their action is impulsive, quick and it suddenly stops; they are readily irritable but easily pacified, and are affectionate; their recollections are swift, but they also forget quickly; they are unable to stand cold, and they are frequently troubled by cold, chill and other

ailments; their vitality (ojas) is meagre; their digestive power is irregular; they sleep but little; they relish sweet, sour and salty tastes.

(2) Individuals whose constitution is predominantly pitta (pitta-prakṛti) are generally unable to bear heat, have limbs which are soft; there will appear dark spots, freckles and swelling on the body; they have excessive hunger and thirst; they are prematurely bald or grey-haired; they have their bone-joints and muscles soft and infirm; they have more sweat, urination and faeces but less semen or sexual urge. Their digestion is good; in fact they have an intense 'digestive-fire', and have therefore to eat heavily. They are generally enthusiastic and courageous, but cannot endure distress. They relish sweet, astringent and pungent tastes.

(3) Individuals whose constitution is predominantly kapha (kapha-prakṛti) are generally plump, soft in their body, delicate in limbs, fair of complexion and good-looking. Their physical frame is well-formed and full; their bone-joints are firm and well-knit. Their gait is firm, their eyes calm and voice pleasing. Their sex-urge is heightened and so is their semen. They are slow in their food-habits, conduct and speech; they are not troubled by pangs of hunger and thirst which in fact are very mild; they are slow in their undertakings and are not easily emotionally upset. They are given to excessive sleep. They dislike cold. They have good memory. Their vitality (ojas) is much; but their digestion is poor. They relish bitter, acrid and astringent tastes.

(4) Individuals whose constitution is dominated by two doshas, vāta and pitta are characterized by the traits specific to the vāta- and pitta-constitutions, insofar as they can coexist.

(5) Individuals whose constitution is dominated by the combination of two doshas, vāta and kapha (saṁsarga) are characterized by the traits specific to the vāta and kapha constitutions, insofar as they can

combine.

(6) Individuals whose constitution is dominated by combination of two doshas, kapha and pitta (saṁsarga) are characterized by the traits specific to the kapha and pitta constitutions, insofar as they can combine.

(7) Individuals whose constitution is dominated by a combination of all three doshas (tridosha) have characteristics specific to each of the doshas, insofar as they can combine (SS, op. cit.).

II. The SS (op. cit., 4,80) mentions that some authorities classify constitutions according to the prevailing bhūtas (viz. primary forms of matter which go to compose the body). Of them, air, fire and water, are explained by them, according to SS, by the characteristics of vāta, pitta and kapha ('tis-rah', explained by DALHAṆA, as vāta-pitta-śleshma-lakshanaih). They correspond to the first three constitutions described above.

The constitution dominated by the earth element is known as pāṛthiva-prakṛti and is characterized by a broad and firm physical frame. The constitution dominated by the ākāśa-element is called nābhāsa-prakṛti and is characterized by longevity, cleanliness and large channels (srotas) (SS, op. cit.).

Blood-Letting: On the assumption that blood vitiated by doshas can bring about numerous diseases (like abscess, erysipelas, enlargement of liver and spleen, loss of appetite, fever, diseases of the mouth, eyes and head), it is prescribed that bad (or superfluous) blood must be let out; the quantity of blood that is to be extracted is determined by the physician.

If the bad blood is not let out, itching, swelling, burning, red colour, suppuration with pain in the affected part result (SS, sūtra, 14, 30).

Four methods of blood-letting were practised: (1) by the application of leeches (jalauka); (2) by the employment of cow-horn (śrṅga); (3) by gourd appliances

(alābu); and (4) phlebotomy by sharp instruments (like lancet, kuthārikā and vrīhimukha). When the blood has been vitiated by vāta then blood-letting by cow-horn (which has heat-making potency and cooling or soothing property) is indicated; if the source of bad blood is pitta, then the application of leeches (which have sweet or soothing properties) is beneficial; and if kapha is responsible for the vitiation of blood, gourd appliances (which are pungent, parching and irritating) are better (SS, sūtra, 13, 5-7).

When the horn is used, its open end (viz. mouth) with a thin piece of muslin tied round its edges, is placed over the part of the body selected for blood-letting and previously scarified or slightly cut in two or three places ('pracchita'): and then the physician sucks (āchūshana) the blood through the aperture at the top-end (viz. tip) of the horn. When, however, the gourd appliance is used, a lighted lamp is placed inside it (antar-dīpa) (SS, op. cit., 8).

The application of leeches and venesection (cutting open a vein, sirā-vyadhana, by sharp instruments) were more frequently resorted to. The former was regarded as milder of the two, and was used for people who were infirm, nervous and delicate. The latter was in the nature of a surgical operation, employing sharp instruments and cutting or opening certain veins in the affected part of the body.

Blood-letting is not advocated in pregnant women, or people suffering from cough, asthma, vomiting of blood, diarrhoea, oedema, anaemia and ascites. It is harmful for people whose blood is not vitiated, children (under sixteen), old people (above seventy), those who have undergone the 'pañcha-karma' treatment, or those who have taken oily substances (cf. SS, sūtra, 14, 21). [See APPLICATION OF LEECHES, VENESECTION, SURGICAL CASES].

Brāhma-Sattva : A personality type of the patient, characterized by traits distinguishing the highest being, Brahṁā, purity, self-control, discrimination, austerity, generosity, gentleness, virtue, benevolence, and readiness of wit. The type belongs to the Sāttvic group of people who are generally healthy, long-lived and happy. [See PERSONALITY OF THE PATIENT].

Brmhana: One of the six preparatory treatments [See UPAKRAMA], it is meant to promote bulk and nourishment of the body (cf. CS, sūtra, 22, 10, br̥hatvaṁ yae chharīrasya janayet). The treatment consists of administration of certain drugs or articles of food (like milk, sugar, ghee, and sweet fruits) which are heavy, cold, soft, oily, bulky and slimy (CS, ibid., 13-14), or prescription of some regimen like sleep, bath, gentle massage (utsādana), and administration of medicated oils as enemata (sneha-vasti or anuvāsana-vasti; CS, ibid., 28).

The use of medicated oils as enemata is included in the pañcha-karma group and is also regarded as a 'soothing' mode of treatment (śamana, insofar as it counteracts the aggravated vāta, 'mārutaghna'; CS, sūtra, 2, 14). It is therefore sometimes classed as a laṅghana treatment. More often, however, it is described as a brmhana method [See PAÑCHA-KARMA].

Treatment procedures classed under brmhana (santarpaṇa) involves drugs and regimen which are in effect the opposite of those involved in laṅghana (apatarpana). [See LANGHANA].

Persons who may profit by this treatment include those who are lean and emaciated, those who are weak, alcoholic, those who walk a lot or have suffered bodily injuries, or indulge frequently in sex. In summer, however, all persons are likely to profit by it. The diseases where this treatment is indicated include wasting diseases, piles, diarrhoea and so on.

The result of this treatment when carried out properly (that is, alternating it with 'laṅghana' or apatarpana sessions whenever necessary, and with due regard to the patient's age, body-constitution, state of health, and prevailing season) is increase of body-bulk (pusṭi). If, however, the treatment has been improperly conducted, obesity, heaviness of the body, skin diseases, urinary disorders, defects of sense-functions, mental disorders and digestive troubles may arise. (See INDICATIONS FOR BRMHANA in Volume VI).

The results of the treatment properly carried out are lightness of body, clearing of the chest, throat and mouth as also of the passages of urine and faeces, elimination of fatigue and lethargy, good appetite, normal hunger and thirst, and mental alertness (CS, op.cit., 35).

The treatment is especially indicated in cases of urinary disorders and skin diseases. Persons who have been excessively treated with brmhana also profit by this treatment. During winter, even the disorders due to vitiated vāta (which are normally cured by brmhana) are cured by this treatment. (CS, sūtra, 22, 24).

If, however, this treatment is excessively given, it may result in shooting pain in the joints, soreness in body, cough, emaciation of face, loss of appetite and hunger, weakness in visual and auditory sense functions, hurried breathing, loss of strength, feeling of darkness, weakening of the digestive power, and mental disturbance. [See INDICATIONS FOR LANGHANA in Volume VI]

C

Causality: Causality is a central concept in Indian medicine, for it is an accepted dictum that the treatment of the disease must always follow an examination of the causes and nature of the disease (CS, sūtra, 20). The cause, the disease as effect, and the cure thereof constitute a relationship of events in a certain time frame. The physician is advised to follow the principle of causality in ascertaining how the disease is caused (hetu, aetiology), the way in which the disease manifests itself (liṅga, symptoms), and the cure which eliminates not only the symptoms but removes the cause (aushadha). The aspects of the disease that merit the attention of the physician while he seeks the cure are: (1) the cause of the disease (nidāna); (2) the symptoms (liṅga); (3) the complications arising from the same causes (upadrava); and (4) fatal prognostications (arishṭa, MN, 2).

The principle of causality involves the ascertainable relation between events or processes in the same time series, such that there is an antecedent condition which is sufficient and necessary for the appearance of a consequent condition. The former condition is called kārāṇa (cause), and the latter kārya (effect). The effect necessarily follows the cause. If the disease is an effect, it must invariably presuppose the prevalence of a cause; and the cause prevailing, the disease will follow. The relation between the two is strongly bonded; the cause is the invariable, antecedent for the effect.

The CS provides many Sanskrit synonyms for cause in the medical context, each of them having a special significance: (1) hetu (literally, that which pervades the effect, hinoti vyāpnoti kāryam), impulse, motive,

cause; (2) nimitta (a word of uncertain formation, possibly derived from mā, 'above'), butt, mark, instrument (also used in combination as in nimitta-kārāṇa, instrumental or efficient cause, distinguished from upādāna-kārāṇa, material cause), omen, ground, reason; (3) āyatana (from the root yat), resting-place, support, seat, cause (especially SS); (4) kartṛ (from kr, 'to do'), that which effects, agent, author, maker; (5) kārāṇa (literally, that which makes another become, kāryate anena; without which something does not become, yena vinā yan na bhavati), cause (more particularly primary cause), means, instrument (especially as in nimitta-kārāṇa, instrumental cause), invariable antecedent (niyata-pūrva-vartti); (6) pratyaya (pratit + in gatau, to go), belief, conviction, evidence, understanding, analysis, explanation, ground, cause or rather a cooperating cause (sahakāri as in *Trikāṇḍa-śeṣha*; used in this sense in the Buddhist doctrine of dependent origination); (7) samutthana (sam+ut+stha+ktā); rising up together, getting up, hoisting, increasing, growth, active cooperation, recovering from illness, also, ascertainment of illness (vyādhi-nirṇaya, *Medinī*); and (8) nidāna (ni+ḍā, that from which something is ascertained, niśchayam dīyate anena), primary cause, origin of existence (especially in Buddhist texts), cause of disease (especially in the medical texts, as for example in nidāna-sthāna, pathology).

Usually, however, two terms 'hetu' and 'nidāna' are frequently used in the Indian medical context. The former expression distinguishes aetiology (rogotpādaka) from symptomatology (liṅga); the latter emphasizes the cause-effect relationship, in contradistinction to the two other methods also employed: viz. invariable prognostication (pūrvarūpa) and concomitant variation (upaśaya, including anupaśaya). The three methods are used either conjointly or separately in order to ascertain the nature of the

disease.

Caustics: The term used for caustics (potential cautery or preparation of vegetable alkalis) in Sanskrit is *kshāra*, which means, that which corrodes or destroys (*ksharaṇa*). It describes the application of caustics or alkaline preparations (alkali is derived from the Arabic *al quliy* "to roast on a pan") as more effective than the use of surgical instruments or their substitutes, because it is not only capable of incisions (*chhedana*), excisions (*bhedana*) and scarifications (*lekhana*), but counteracts the vitiation of all three doshas (*tri-doshaghna*), and this comprehends qualities of many (*nānau: shadhisamavāyāt*).

The *SS* distinguishes between the external mode of application of caustics (*pratisāraṇīya*) and the alkaline potions (*pāṇīya*). The external application is with the help of a wooden spoon (*darvī*), a spoon-like probe (*śalākā*) or a brush (*kūrcha*, *SS*, *chikitsā*, 6, 8). The use of external application is indicated in intractable skin-diseases, fistula-in-ano, tumour, bad ulcer, sinus, external abscess, haemorrhoids, and so on. It is not indicated in the diseases of the eye.

Care must be taken to avoid application on veins, nerves, joints, tender-bones, cartilages, sutures, arteries, throat, umbilicus, genitals, regions of external channels (*srotas*), parts covered by thin layers of skin and other delicate parts of the body (*SS*, *op.cit.*, 29). This is because the functions of caustics include causing blisters, burns, supurations, and openings.

Patients who are unfit for this mode of treatment are children, aged folk, weak persons, timid persons, patients with abdominal dropsy, high fever, abnormal thirst, or urethral discharges, patients given to fits of fainting, pregnant women, menstruating women, and so on (*SS*, *op.cit.*, 28). It is, however, remarkable that *AHr* (*sūtra*, 29,10-11) advocates the application of caustics (*dārana*,

explained by *HEMĀDRI* as *Kshārādinā dvāra-karaṇam*, as distinguished from *pāṇa*, *śāstreṇa*) in the case of timid folk and weaklings (*alpa-sattva*, *Sattva* is explained by *HEMĀDRI* as *mānasam balam*), children (*bāla*), aged folk (*pāka*) contrary to the prescriptions in *SS* (*op.cit.*).

There is a warning that the effect of improper application of caustics may be similar to the harm caused by poisons (*visha*, which cause pain and spread all over the body, *NiS*), fire (*agni*, which burns up and causes explosions, *NiS*), surgical instruments (*śastra*, which cut up the body, *NiS*) and lightning (*aśani*, which kills immediately, *NiS*), (*SS*, *op.cit.*, 31).

Cautery: Cautery (actual cautery, *agni-karma*) is a method of burning or scarring organic tissue by means of a hot iron (*dagdha-śalākā*) or a similar appliance. It is distinguished from caustics (potential cautery, *kshāra-karma*) in that the latter employs alkaline substances for external application (*pratisāraṇīya*) or internal administration (*pāṇīya*) [*See CAUSTICS*].

The *SS* (*sūtra*, 12, 3) claims that cauterization is better than the application of caustics, for the diseases that are burnt with fire disappear and do not recur (*rogāṇām apunar-bhāvāt*), and the diseases which are incurable by herbal medicines or surgical instruments or by caustics are cured by cautery (*bhesheja-śastra-kshārair asādhayānām tat-sādhya-vāt*). The commentator, however, points out that the superiority of cautery is not only in the action (*karma*), but in the quality (*guṇa*); he holds that caustics are better because they counteract the vitiation of all three doshas, and are effective in incision, excision and scarification (*NiS*, on above).

Cauterization involves heating in fire a surgical instrument like a knife (*agni-dagdheṇa śāstreṇa*, *SS*, *chikitsā*, 2, 46), and using plates made of copper, iron or lead (*traputāmra-sīsa-paṭṭaiḥ*, *SS*, *ibid*, 13) for outlining the

affected area (may be a tumour), so that the surrounding areas are uninjured. Other accessories used in cautery include pippali (*piper longum*), excreta of goats, teeth of cows, sara (*saccharum sara*), probes (*śalākā*), jambaushta (a surgical instrument), articles made of copper or silver, honey, jaggery or treacle, and oil (SS, op.cit., 12).

Two varieties of cautery are recognized: skin-cauterization (*tvag-dagdha*) and flesh-cauterization (*mamsa-dagdha*). The former consists in burning the skin which emits a peculiar cracking sound and foul smell; and the skin contracts. The latter brings about blackish brown hue in the part of the flesh that is cauterized, slight swelling in that part accompanied by pain, but the incidental ulcer becomes dry and contracted. The SS (op.cit., 7) adds that actual cautery may be conducted even on nerves or veins (*sirā*).

The modes of cauterization depend upon the seats of disease (*rogādhishṭhāna-bhedāt*), and are four-fold; ring (*valaya*) made by heated rods, dot (*bindu*), lateral lines (*vilekha*, actually three kinds of lines, transverse, straight and crooked, *tiryagjuvakra trividha-rekhā*, *NiS*). and rubbing modes (*pratisāraṇa*, by heated rods, SS, (op.cit., 11).

All seasons, barring autumn and summer are favourable for this operation. But there is need to examine the rooted cause of the disease, vulnerable parts of the body, and the strength or weakness of the patient before the operation is undertaken (SS, op.cit., 12).

Cauterization is indicated in cases of glandular inflammation, tumour, fistula-in-ano, elephantiasis, warts, hernia, scrofula, and so on. In case of ophthalmia, the area around the eyebrows and temples may be chosen for cauterization. The roots of the eyelashes need to be cauterized if the disease involves the eyelids, but care must be taken to cover the eyes with a wet and thin layer of red dye (*ālaktaka*) [See CAUSTICS, SURGERY, SURGICAL

CASES.]

Chhāyā-purusha: Prognostication of diseases and death by examining one's own shadow (*chhāyā-purusha*) cast on the ground and visualized in the sky, was a practice current among the yogins belonging to Śaivāite persuasion (*Śivāgama*). The ability to prognosticate was said to be acquired by practice to the accompaniment of some rituals (cf. *Vaidyāmṛta*, of MORESVARA, son of MĀNIKA-BHATTA, section on 'chhāyā-purusha-lakṣaṇā', edited with Telugu tr. by Nivṛtti-Vīrasvāmi Śāstrī, Śārādā-nīlaya Press, Madras, 1880).

One of the accounts of the practice mentions that the yogin who is desirous of acquiring this ability retires to a secluded forest, stands with his back to the bright sun and contemplates his shadow that is cast in front of him, focussing his attention in the region of the neck. After some time, he shifts his gaze to the clear sky in front of him and repeats a mantra ('Om hrīm para-brahmaṇe namaḥ') one hundred and eight times. He then sees a cave formed in the sky, and this will gradually assume the shape of the yogin's own shadow, that is, a replica of the shadow cast on the ground in sunlight. Uninterrupted practice for six months is expected to give the yogin the ability not only to clearly visualize his own 'shadow-person' in the sky but to foretell future occurrences with regard to his own body.

If the visualized shadow is densely dark, death in six months is indicated; if it is yellow, grave illness; if it is red, violent death; and if multi-coloured, mental disorder of a serious type. If from the shadow, feet, thighs and stomach are missing, death in six months, in a year, and in two years are indicated respectively. If the head and right arm disappear from the shadow in the sky, imminent death is indicated. The absence of head indicates death in a month's time; the absence of thighs, death in twenty-four hours; the

absence of neck, death in eight days. And if the shadow itself is not cast, then immediate death is indicated.

Constitutional Differences: Human beings vary among themselves with regard to the relative prevalence, proportion and involvement of the seven bodily constituents (dhātus) and the three primary principles (doshas). The state of health as well as the proneness to particular diseases varies from individual to individual. The physician needs to take this into account before commencing the course of treatment. External appearances (like being lean and emaciated, or plump and well-fed) are not reliable; relative roles of the body constituents must be ascertained both for diagnostic and prognostic purposes. Thus, among the examination of the patient, the analysis of constitutional differences (sāra-parīkshā) is important as it enables the physician to understand the susceptibility of the patient for illness, his capacity for resistance, and the ability to recover health. This tells "the extent of the patient's strength" (bala-pramāṇa) (CS, vimāna, 8, 114 and 115; cf. also SS, sūtra, 35, 16).

I. The constitutional difference (sārah, literally strength or stability from the root 'sr', *sthire*) [See SARA]. is defined as the strong or enduring ingredient (sthira am śa) of the psychophysical make-up, causing certain peculiarities of body-build, behaviour, disposition and susceptibility to or against emotion. There are eight major constitutional types which are of practical import: seven types each showing the dominating prevalence of one of the body constituents over the other six and the eighth suggesting the prevalence of mental functions (sattva-sāra).

Details of these types enumerated in texts (CS, op.cit., 103-110; SS, op.cit., 16) refer to normal and healthy persons (prākṛta) but with the probability of the onset of ailments (vikṛti). Individuals in whom all the body constituents and the mental functions are

equally prevalent (sarva-sāra) are ideal in normalcy and health; they are not only exceedingly strong (atibala) and happy (parama-sukha-yukta); but are capable of resisting stresses (kleśa-saha) and go through life with confidence (pratyaya); few and mild are the ailments that trouble them (mandavikāra); they also age slowly (mandajarasa CS, op.cit., 111).

The eight types, which are characterized by the predominance of one or the other of the body constituents, suggest slight, moderate or excessive deficiencies with regard to the other body constituents; and, to that extent, they are not immune to ill-health. However, susceptibility of each of these eight types to disturbances is specific to the prevalence and deficiencies of particular body constituents.

(1) The term tvak-sāra (literally meaning skin-prevalent constitution) actually refers to the prevalence of rasa, the finest and most subtle of the seven body constituents. DALHAṆA (on SS, op.cit.) explains that this type is so called because "rasa is located in the skin" (tvakstho rasah), which explanation is not very meaningful; ЧКР., however, offers no explanation for this rather unusual expression. The Sanskrit word tvak normally means something that covers (tvach samvarane), but the older usage appears to be in the sense of spread or pervasion (tan, with chik anaccha vah, *Uṇādi-sūtra*, 2, 63; tanoti vistārayati). The CS and SS may have used this expression in this sense, for rasa is the only bodily constituent that spreads throughout the body.

While the CS begins with this constitutional type in its enumeration, the SS closes the list with this type, and adds that the earlier one in each case is the more important than the later, from the point of view of health (āyuh, literally means life-span) and prosperity (saubhāgya). That is to say, the tvak-sāra type is the least important, the most important being the type where mental

functions prevail (*sattva-sāra*).

This type is characterized by the skin being unctuous, clear, lustrous and soft; and bodily hair being tender and deep-rooted. Those belonging to this type are generally healthy, happy, pleasure-loving and powerful, knowledgeable and excitable (CS, op.cit., 103).

(2) The second type is marked by the prevalence (that is, strength) of blood (*rakta*) in the constitution. Those belonging to this type have copper-coloured eyes, nail, palate, tongue and lips; and their body tends to be unusually warm. They are tender and not so strong, although they are generally enthusiastic. They are usually incapable of coping with stress. They are intellectual in their general orientation (CS, op.cit., 104).

(3) The muscle-prevalent type (*māṃsa-sāra*) is characterized by well-formed, heavy, plump and large body, with bones and joints well-hidden under ample flesh. The individuals belonging to this type are happy and generally healthy; they are patient, painstaking, ready to forget and forgive, and free from avarice (CS, op.cit., 105).

(4) The type that is characterized by the prevalence of the adipose tissue (*medaḥ-sāra*) consists of individuals who are especially unctuous in complexion, eyes, hair, teeth, lips, urine and faeces. They tend to be powerful, generous and simple; they are fond of enjoyment and their conduct betrays culture and delicacy (CS, op.cit., 106).

(5) The bone-prevalent type (*‘asthi-sāra’*) is characterized by robustness in the limbs severally, firm teeth, nails and bones, physical strength, zeal and activity (CS, op.cit., 107).

(6) The marrow-prevalent type (*‘majjā-sāra’*) has soft organs, physical strength, unctuous complexion and voice, joints which are thick, long and rotund; the individuals of this type are strong, intellectual and knowledgeable (CS, op.cit., 108).

(7) The semen-prevalent type (*‘śukra-sāra’*) has individuals who are gentle and

cheerful, fair in complexion, and attractive in appearance. They are generally healthy, clean in habits, and abundant in progeny (CS, op.cit., 109).

(8) The last type is characterized by the prevalence of mental qualities more than in any other type and is hence known as *sattva-sāra* (the expression ‘*sattva*’ meaning mind). The qualities mentioned in the text include memory, devotion, sincerity, pleasant thoughts, cheerful disposition, courage, gratitude, zeal, and cleanliness (CS, op.cit., 110).

The above types may be either extreme, or moderate (*madhya*). The latter types possess the specified traits in moderate measure.

II. There is also a classification of constitutions based on the three primary principles (*doshas*): *vāta*, *pitta* and *kapha* (CS, *vimāna*, 8, 96-100).

(1) The *vāta*-constitution is characterized by the body being lean, ill-nourished, but strong; the skin tending to a brownish hue is rough, hard, cracked, and dry; the body hair is scanty and coarse; the hair on the head is brownish in colour, little in quantity, coarse to touch, and curved or wavy in shape. The body weight is not much; and movement is quick, unsteady, light and changing. Sleep is little, and dreams concern flight in the air. The speech is fast and indistinct. Food eaten is little and eating habits are irregular; tastes liked are sweet, sour and salty, and the preference is for steaming food and drinks. The discharges (urine and faeces) are scanty. The person belonging to this type is easily fatigued; but is fond of outdoor exercise, travel, games, music and dance. He is quick to comprehend, and quick to forget. His sexual urges are poor, but he finds himself unable to control his senses. He is easily upset and excited.

He is greatly susceptible to illnesses, especially of the *vāta*-type (for example, nervous diseases and mental abnormality). And his reaction to drugs is erratic; often-times he

requires but minimum dosage.

(2) The pitta-constitution is characterized by traits which are moderate. His body is of medium height and weight, medium nourishment, medium strength, etc. His skin tends to assume copper-colour or yellowish hue. He tends to grow bald. His movements are neither quick nor slow, neither unsteady nor steady. So too is his speech. His appetite is keen and hearty; and he has frequent feelings of hunger and thirst. He likes sweet, bitter, and astringent tastes, and prefers cold food and drinks. His sleep is moderate and his dreams pertain to red-coloured and frightening objects. He is moderate in his powers of comprehension and expression of emotions.

He is susceptible to illnesses of the *pitta*-type (like the disorders of blood, digestive disturbances, and urinary ailments). And his reaction to drugs is quick; he often has adverse reactions even when slight doses of medicine are administered.

(3) The kapha-constitution is characterized by the body being short, stout, large, and well-nourished, the skin being unctuous, soft, uncracked, yellowish in hue or fair complexioned; the body hair as well as the hair on the head tends to be plentiful and soft, dark in colour and wavy in shape. The body-weight is much, the movement slow and steady, and the gait dignified. His talk also is slow, but distinct. The individual tends to sleep heavily, and his dreams pertain to lakes and rivers, flowers and aquatic birds. His appetite is little; and he seldom feels hungry or thirsty. He likes to eat dishes which are pungent, bitter or astringent. He is slow to understand, and slow to get emotionally upset. His desires are few, and he has control over his senses.

He has resistance to illness, but when he gets ill, it is usually a respiratory disorder. His reaction to drugs is slow, and he does not get adverse reactions even when the dosage is heavy. He requires as a general rule a high

dosage of medicine. He is generally healthy and energetic.

Constitutional Diseases: Diseases pertaining to the constitution of the individual (that is, the body-mind complex) are called in the *SS* (sūtra, 24,4) *ādhyātmika* (*adhi*+ *ātmā*, and *ātmā*=*samanaskam sarīram, NiS*). They include three types of diseases: (1) genetic ailments (*ādibala-pravṛtta*), like skin ailments (*kushṭha*), piles (*arśa*), asthma (*śvāsa*) and so on, which are due to the vitiated sperm or ovum of the parent; (2) congenital diseases (*janma-bala-pravṛtta*), deformities, blindness, deafness, which may be due either to nutritional deficiencies (*rasakṛta*) in the mother during pregnancy, or to the ill-treatment of the mother during pregnancy (*dauhrdāpachāra*); (3) dosha-diseases (*dosha-bala-pravṛtta*), or idiopathic diseases caused by the disturbance of the doshas (*vāta*, *pitta* and *kapha*) by irregular and unwholesome food and conduct, and being either bodily (*śarīra*) or mental (*mānasa*) [See DISEASE].

D

Deductive Reasoning: 'Yukti' is etymologically explained as an act of conjoining or relating (*jujyate iti*, from *yuj-ktin*), and has the following meanings: union, junction, application, practice, usage, device and stratagem. Generally, it is taken as reasoning, or deduction from circumstances, hence is synonymous with inference.

However, *yukti* is considered as quite distinct from inference or *anumāna*, in texts relating to logic and also in texts like the *CS*

and the SS. The main difference appears to be the assumption of the well-defined and formal syllogistic form in anumāna, and its absence in yukti. The lexicon *Medinī* describes yukti as a general act of reasoning (*nyāya*); and the *Smṛti* texts employ the expression in the sense of transactional conduct that is proper or worldly wisdom (*loka-vyavahāra*), distinct from but complementary to scriptural injunctions (*dharma*). Yukti in this context means the ascertainment of a course of conduct relying on one's ability to reason (*yuktir arthāva-dhāraṇam*).

Skd cites *NĀRADA* and illustrates yukti as reasoning in this manner: by looking at a person with a flaming torch in hand we deduce that he is about to set fire to something; or when we see a man with a drawn sword in hand, we infer that he is about to injure someone; or when we see a man with an axe in the forest we deduce that he intends cutting a tree. The text cited explains that this kind of reasoning depends upon observed details (*pratyaksha-chihnair-vijñeyo*).

The *CS* mentions yukti (reasoning) immediately after inference (*sūtra*, 11, 21-22), and points out that it differs from inference and that it may in fact be taken as an independent source of valid knowledge (*ibid.*, 17), where examination is regarded as four-fold, that is instruction from reliable authority, observation, inference and reasoning or yukti. It may be noted that elsewhere (*CS*, *vimāna*, 8, 83) examination is regarded only as three-fold namely observation, inference and instruction from reliable authority. It is possible that here yukti was subsumed under inference.

The *CS* (*op.cit.*, 25) defines yukti thus "The intellect (*buddhi*) cognizes events as resulting from a peculiar concatenation of many causative factors, and such cognitions, which are valid for all three segments of time (namely, past, present, future), go by the name of reasoning (*yukti*). It is by the help of reasoning that an individual attains all three

objectives of life (wealth, pleasure and virtue)". The commentator explains that the expression 'resulting from concatenation' is to be taken in the sense of 'producing knowledge relating to the outcome'.

The text (*CS*, *op.cit.*, 23-24) provides illustrations of reasoning. We reason that plants grow as a result of concatenation of the availability of water, preparation of the soil, the potency of the seeds, and the seasonal facilitation; we reason that the embryo is formed as a result of the concatenation of the six primary bodily constituents (the five physical elements and the soul); we reason that fire is produced as a result of the concatenation of the upper and the lower fire-drills and the act of drilling; we reason that the disease is cured as a result of the concatenation of the four aspects of treatment (the physician, the patient, the medicine, and the nurse).

The illustrations given suggest that reasoning is a valuable aid for the physician to plan the course of action while tackling a disease. But its value is also to be seen in effectively relating several factors each of which is not by itself causative, but all of which together function as the cause of a particular effect. This is the significance of the expression *yoga* for concatenation or combination. Yukti is thus essentially an act of relating (*yujyate sambadhyate anayā*).

Chkp argues that yukti here is of the nature of *ūhā* (comprehension, conceptualization, consideration, guess-work), and is an aid for the sources of valid knowledge (*pramāṇa*). He concedes that it is not very different from inference, but holds that it produces definitive knowledge of a kind, different from that produced by inference (*CS*, *sūtra*, 11, 23-25).²¹

The *SS* (*uttara-tantra*, 65, 5-7) employs the word yukti in the sense of technical expressions (*tantra-yukti*) which provides not only an accurate understanding of the problem

but rational explanations thereof. There is a list of thirty-two terms, among which four relate to deductive reasoning (1) upadeśa: general instruction for taking a line of action by a statement 'thus', for example, 'Do not keep awake at night, nor sleep during daytime'; the implicit reasoning is that sleeping during daytime would generally aggravate kapha, and therefore keeping awake at night in such a condition would actually be helpful; the instruction is valid only in the state of general health (prāyika); (2) apadeśa: statement of reason, 'owing to such and such cause', for example, 'kapha is aggravated by the intake of sweet articles of food'; the reason adduced is with reference to a specific effect; (3) prādeśa: ascertainment concerning a present event on the basis of past events in similar circumstances, for example, 'The obstructing matter in Devadatta's body was extracted by so and so; and, therefore, the same person will be able to extract the obstructing matter from Yajñadatta's body'; which is really analogical reasoning; and (4) atideśa: ascertainment concerning a future event on the basis of relevant present event, for example, 'A particular action helps bodily wind coursing upward, and, therefore, the person taking recourse to that action is likely to be attacked by the ailment known as udāvarta. SS (op.cit).²²

Deha-Prakṛti: The expression refers to body constitution in its two aspects: the prevailing dosha (dosha-prakṛti) in the constitution and the prevailing bhūta (that is, the five primary forms of matter, bhūta-prakṛti) in the composition of the physical frame.

The CS (vimāna, 6,13) holds that the balance of the three doshas (viz. vāta, pitta and kapha), is represented by the normal healthy constitution (prakṛti) while the disturbance of the doshas constitutes an unhealthy constitution, which may be of three varieties; vāta-dominated, pitta-dominated and kapha-dominated.

The SS (śārīra, 4.64-79), however, enumerates seven types of body constitution in accordance with the prevalence of each of the doshas, pairs of the doshas (saṁsarga-ja), and all three doshas together (tri-dosha).

The SS (op.cit., 4.80) also mentions that some authorities classify the body-constitution into five types in accordance with the prevailing bhūta: air, fire and water (corresponding to the three dosha-prakṛtis, vāta, pitta and kapha respectively), earth and ākāśa.

Sometimes a third dimension of the deha-prakṛti is also mentioned, namely the sattva-prakṛti, in accordance with the psychic constitution. [See BODY CONSTITUTION].

Details to be Inferred: Whatever details are not available to the physician's direct observation (pratyaksha) [See EXAMINATION BY THE SENSE-ORGANS] must be obtained by him through inference (anumāna), which has been recognized as a valid means of knowledge [See ANUMĀNA].

Among the details obtainable by inferential reasoning, the CS (vimāna, 4,8) includes the following: (1) digestive power (agni) to be inferred by the ability of the patient to eat and digest some definite amount of food; (2) bodily strength (bala) by the exertion the patient can undertake; (3) auditory efficiency (śrotra) by his ability to hear and understand the physician's words; (4) the state of the mind (manas) by correct comprehension of the meaning intended (arthavyabhichāra); (5) condition of the cognitive faculty (vyavasāya) by the responses he makes; (6) the energy state (rajas) by his attachments; (7) the stuporose condition (moha) by non-cognition; (8) anger (krodha) by violent disposition calculated to hurt; (9) sorrow (śoka) by the shedding of tears and such other feelings of helplessness; (10) joy (harsha) by pleasurable activities like song and dance; (11) satisfaction (prīti) by cheerfulness shown in the face (12) fear (bhaya) by

withdrawal tendencies associated with diffidence and uneasiness; (13) courage (dhairya) by approach tendencies associated with confidence and ease; (14) energy (vīrya, defined as the mental application to any enterprise commenced, however difficult) by resolute application and initiative taken; (15) steadfastness (avasthāna) by the absence of distraction and slackening; (16) convictions (śraddhā) by the opinions expressed; (17) sharpness of intellect (medhā) by how well the things are understood; (18) abstract thought (saṁjñā) by the ability to verbalize; (19) memory (smṛti) by the things he recollects; (20) modesty (hrī) by the sense of shame; (21) inclinations (sīlam) by his habits; (22) aversions (dvesha) by the things he avoids; (23) dishonesty (upadhī) by subsequent occurrences; (24) perseverance (dhṛti) by the absence of slackness; (25) accommodation (vaśyatā) by how well he follows instructions; (26) age (vayas) by chronological considerations, likes and dislikes (bhakti) by the place where he lives, homologation (sātmya) by the things he usually takes with no adverse effect, and the origination of disease (vyādhi-samutthāna) by characteristic distresses that he experiences; (27) disease with hidden symptoms (gūḍha-liṅga) by favourable or unfavourable reactions to the medicine initially administered; (28) the particular extent to which a dosha is vitiated (dosha-pramāṇa-viśeṣa) by knowing how great the transgressions of normal rules of health have been; (29) the diminution of the life-span (āyushah-kshaya) by the signs that forebode death; (30) possible welfare (upasthita-śreyastvam) by the meritorious and wholesome activities undertaken; and (31) prevalence of unpolluted or clear mind (amalaṁ sattvaṁ) by the absence of emotions, passion or hatred, stresses and hurdles. (CS, vimāna, 4, 8).

There are also dreams (svapna), which provide important information, and these can be known only by questioning the

patient. Likewise the patient's likes and dislikes (icchā-dvesha), views and attitudes (abhiprāya), as well as the feelings of happiness or misery (sukha-duhkha) can all be ascertained only by skillful interrogation (chatura-praśna).

Dhūma-Pāna: Inhalation of medicated smoke is prescribed as a minor treatment procedure in order to dissolve the vitiated kapha in head, nose or throat. Different types are recognized in accordance with the effects: palliative or sedative (śamana), cleansing the system (virechana), curing cough (kāśaghna), producing emesis (vamanīya), oleating (snaihika), habitual (prāyogika) (SS, chikitsā, 40). There is also a division according to the drugs used: (1) snigdha, beneficial in vāta disorders, (2) madhya, beneficial in vāta-kapha disorders, and (3) tikshna, beneficial in kapha disorders. It is also used to fumigate ulcers (vraṇa).

Selected drugs are powdered and put into a dry hollow cylinder, smeared with ghee or oil and then lighted for inhalation through the mouth and also through the nostrils.

It is recommended in diseases like asthma, coryza, cough, hiccough, loss of voice, foul breath, anaemia, itching, pain in the eyes, ears or mouth, sleepiness, excessive salivation, loss of appetite, obstruction in throat, toothache, worms, heaviness of voice, harshness of speech, lockjaw and also after surgical operations. However, it is harmful in haemorrhages, extreme pain, cataract, head injury, fainting, dryness of palate, diabetes and narcosis. One should not resort to this treatment after consumption of alcohol, after the purgation-therapy, after consumption of curds, milk or honey, when the palate is dry, or when one is fatigued or intoxicated. It is not indicated for pregnant women.

Diagnosis: Diagnosis etymologically means to distinguish, to discern; it is the determination of the nature of the diseased condition of

the body; it is also identification of a disease by investigation of its symptoms and development. The Sanskrit expression *nidāna* is defined as 'exact determination of disease' (*roga-nirṇayah*, *Viśva*, lexicon). It is explained that *nidāna* means not only determination but also a formal statement or communication (from the prefix 'ni', which, according to VARARUCHI'S *Upasarga-sūtra*, means *nischaya-nibodhayoh*). It is usually given as a synonym of 'precise knowledge of the disease' (*roga-vijñāna*), 'determination of the nature of the disease with reference to the possible treatment' (*roga-viniśchaya*, *MN*, 1) [See *NIDĀNA*].

Diagnosis is an important preliminary activity in medical practice. The *CS* (*sūtra*, 20-21) states: "The physician must first diagnose the disease (*rogam ādau pariksheta*), then examine the drug or treatment that he intends prescribing (*tato' nantaram aushadham*); and only then should he begin the treatment with full knowledge of the disease as well as the treatment" (*tatah karma jñānapūrvam samācharet*; *karma* is *chikitsa*, *Chkp*). If without proper diagnosis, the physician begins the treatment, his success, even if he be ever so well acquainted with drugs and treatment, is only a chance occurrence (*siddhir yadrachaya*).

Elsewhere the *CS* (*vimāna*, 4, 12) describes the diagnostic process as 'entrance with the mind' (*raviśati*; *Chkp*, *buddhyā avagāhate*) with the help of the lamp of knowledge into the interior of the body of the patient (*āturasya antarātmānam*; *Chkp*, *antah-śarīre*). The 'lamp of knowledge' refers to the three-fold means of knowledge (observation, inference and verbal testimony, *CS*, *vimāna*, 4,3), or to the three-fold processes (by observation, palpation and interrogation, *AHr*, *sūtra*, 1, 22); or it is six-fold (by the five sense-organs and by interrogation, *SS*, *sūtra*, 1) or ten-fold examinations (by cause, instrument, and so on, *CS*, *vimāna*, 8, 84-131), [See *THREE-FOLD EXAMINA-*

TION: TEN-FOLD-EXAMINATION].

Diagnosis proceeds in five stages; or there are five aspects of diagnosis, hence the term *pañcha-lakshana-nidāna* (*CS*, *nidāna*, 1, 6; *AHr*, *nidāna*, 2) denotes five means of knowing about disease, (*pañcha-jñānopāya*, *MK* commentary on *MN*, 1, 2): (1) *nidāna* or aetiology, that is, the proximate (*āsanna*) and distant (*viprakṛṣṭa*) causes which brought about the disease; (2) *pūrvārūpa* or *prāgrūpa*, is the early manifestation of the predisposing symptoms, where the signs and symptoms are meagre (*alpa*), not fully manifest (*avyakta*), and unclear (*asphuta*); (3) *rūpa* or *lakshana*, the group of signs and symptoms by which the disease is completely manifest; (4) *upaśaya* is the ascertainment of the nature of disease by the experimental employment of a diet or conduct; and (5) *saṁprāpti* or *āpti*, understanding of the course of the disease (*āgatih*) with reference to the dosha and its location and spread, and for the purpose of prognosis. [See *NIDĀNA*, *PŪRVA-RŪPA*, *SĀMPRĀPTI*, *UPAŚAYA*, *RŪPA*].

Usually, diagnosis is in terms of three major causes of all diseases: (1) *asātmyen-driyārtha-saṁyoga*, incompatible contact of the sense-organs and the sense-objects leading to stressful transaction; (2) *prajñā-parādha* (errors of judgement, or wilful excesses in conduct); and (3) *parināma* (or *kāla*), the impact of time in terms of seasonal variations and ageing (*CS*, *sūtra*, 11, 43, and *nidāna*, 1, 3).

Diagnosis also includes the ascertainment of the stages in the course of the disease (*kriyā-kāla*): (1) accumulation of the vitiated doshas in their own places, revealed in rather vague signs and symptoms (*saṁchaya*); (2) excitation, tending towards more crystallized but reversible signs and symptoms (*prakopa*); (3) spread of the vitiated doshas to other parts, organs and systems in the body, but still not irreversible (*prasara*); (4) specificity in the location of the vitiated dosha causing abnormal condi-

tions, with signs and symptoms which are recognized as early manifestation of the disease or *prāgrūpa* (*sthanasamsraya*): (5) assumption of a specific clinical form of disease like fever, diarrhoea, oedema, corresponding to *rūpa* or the pattern of signs and syndromes (*vyakti*); and (6) the natural subsiding or arresting of the disease after running its course or a break-out into chronic and grave forms of disease (*bheda*). (*SS. sūtra*, 21, 18f). [See *KRİYĀ-KĀLA*].

Diminution in Vitality: Symptoms and Causes: Vitality (*ojas*) is regarded as the transcendental energy of all the bodily constituents (*dhatunām yat param tejah. SS. sūtra*, 15), the essence (*sara*), and activator (*tejas*). Abiding in the heart, it pervades the entire body and makes for its continuance and function (*AHr. sūtra*, 11, 37). As long as it is normal in its quantity (*pramāṇa*), quality (*guna*) and activity (*karma*), the body is strong, immune to diseases, and capable of all functions, physical and mental.

Vitality is dependent on several factors and may increase or decrease. Increase in vitality results in cheerfulness (*tushti*), bodily bulk (*pushti*) and physical strength (*bala, AHr., op.cit.*, 41). Therefore, increase in vitality is not to be construed as a disorder (*vikāra*) like the increase in one of the *doshas*, unless such increase in vitality also entails derangement or departure from its normal site (cf *AR* on *AHr.* *ibid*; also *SS. sūtra*, 15, 30).

Diminution or loss of vitality (*kshaya*), however, is a serious condition, and unless remedied, may lead to death. It weakens all bodily constituents and renders their normal functioning difficult or impossible. It makes for increased inefficiency of body and mind, making both susceptible to illnesses. In the progressive diminution of vitality, the *SS* (*sūtra*, 15, 28-32) recognizes three stages: (1) derangement (*viśramaṇsa*), that is, departure or dislodgement of vitality from its normal

sites (*sthānāt chyutih*): (2) disturbances causing distress (*vyapat*), or spread of the derangement causing changes in the normal functions; and (3) loss of vitality (*kshaya*). Each stage is characterized by symptoms which are also progressive, leading to death. The physician ascertains the curability or otherwise of the disease by considering these symptoms.

Derangement (*viśramaṇsa*): (1) looseness of joints (*sandhi-viślesha*); (ii) general debility of the body (*gātrānām sadanam*); (iii) the fall of the *doshas* (*dosha-chyavanam*), or departure of the *doshas* from their normal regions of residence (or the disturbed movement of vitality itself, prompted by the vitiation of the *doshas*, according to some authorities, or the uncontrolled elimination of the *malas*, according to other authorities); (iv) obstruction of activity (*priya-sannirodha*), like difficulty in speech, bodily movement and mental activity (*DALHANA* ON *SS. ibid*).

Disturbances causing distress (*vyapat*): (i) stiffness of the joints and physical inability to move, along with heaviness of the limbs (*stabdha-guru-gātrātā*); (ii) dropsical swelling of the limbs owing to disturbed *vāta* (*vāta-śopha*); (iii) discoloured complexion (*varna-bheda*); (iv) fatigue and exhaustion (*glāni*); (v) drowsiness and stuporose condition (*tandṛa*); and (vi) sleepiness and coma (*nidrā*).

Loss of vitality (*kshaya*): (i) spells of fainting resulting in the non-function of cognitive senses (*mūrcchā*); (ii) bodily emaciation or wasting of muscles (*māmsa-kshaya*); (iii) comatose or semi-conscious state or distraction of mind (*moha, vaichittiyam*); (iv) bewilderment, delirium and incoherent talk (*prajāpa*); and (v) death (*marana*).

The general symptoms of diminution in vitality involve psychosomatic details such as fright, owing to debility, frequent absorption of mind, troubled organs, lack of lustre in appearance, absence of zeal, dryness of body

and emaciation (CS, sūtra, 17, 73; also AHR, sūtra, 11, 39-40).

The causes of diminution in vitality have been enumerated in CS (sūtra, 17, 76-77) as follows: exertion, (vyāyāma), fasting (anaśana), worry (chintā), intake of dry food, food in small quantity, and food having a limited range of tastes (rūksha-upapramitāśanam), breeze and sun (vātātāpam), fear (bhaya), sorrow (śoka), keeping awake at night (prajāgara), excessive discharge of phlegm, blood, semen waste products like sweat, urine and faeces (ativartana), ageing (kāla), and troubles caused by evil spirits (bhūtāpaghāta).

Dissection: Dissection is a valuable aid in the understanding of human anatomy and has been recognized as such in SS (sārīra, 5, 47-49). The dead body complete in all its limbs (samasta-gātra), of a person who had not died from effects of poison (avishopahatam) or from long-standing disease (a-dīrgha-vyādhi-pīḍita), and who was not yet a hundred year old (a-varsha-śatika) was regarded as fit for dissection. The intestines of the body was cleared of faecal matter (nihsrśtānta-purīsha), then well-wrapped with muñjā (*Saccharam muñja*), tree-barks (valkala), grass (kuśa), hemp (śana) and so on, and kept in a cage-like contraption, which was left in a secluded or hidden (dark aparakāśa) place. Seven nights later, the decomposed body was taken out and rubbed slowly with a brush made of *Andropogon muricatus* (ushīra) or hair (vāla), bamboo (veṇu), or tree-bark (valkala). The student examined with his own eyes (lakshayet chakshushā) all internal as well as external (bāhya-ābhyantara), keeping in mind the textual descriptions (yathokta).

The SS (op.cit., 48) makes it clear that the prospective surgeon must enhance and complete his knowledge of anatomy acquired from texts (śāstra-dr̥ṣṭa) by actual observation of the parts of the body (pratyakshato

dr̥ṣṭvā). The two are complementary, and together, they perfect the surgeon's equipment (ubhayam bhūyo-jñāna-vivardhanam). However, dissection was never practised for post-mortem examination (as diagnostic aid). And with the decline of surgery as a treatment procedure from popular favour, dissection also became a lost art in India. [See SURGERY].

Dosha Movement: The knowledge of the extent, direction and nature of the movement (gati) of the three doshas (vāta, pitta, kapha), by themselves and relatively to each other, in the patient is important for the physician in order to select the drugs or prescribe a suitable line of treatment. Without this knowledge, treatment procedures, especially like purgatives (in diseases like adhogata rakta-pitta or downward haemorrhage) can be dangerous.

The dosha in its normal condition and in its proper place is described as 'sthiti' or 'sthāna'. The three doshas in this state are indicated by the feeling of well-being or health. But the dosha being dynamic in nature will easily increase (vrddhi, or aggravation) or decrease (kshaya, or diminution). The former is indicated by abnormal activity, or by signs and symptoms that are outstanding. The latter, however, is indicated by the absence of such signs and symptoms (CS, sūtra, 17, 112; also 17, 62; and CHKP. on above).

The normalcy, aggravation or diminution of the doshas are assessed with reference to the normal quantity (pramāṇa), quality (guṇa) and function (karma). Vāta, however, cannot be known with regard to its quantity, for it is not a concrete (mūrta) substance. The normal or healthy quantity of pitta is said to be five 'aṅgalis' (about 15-20 oz); and the normal quantity of kapha six 'aṅgalis' (about 18-24 oz; CS, sārīra, 7, 15). Increase or decrease is with reference to this normalcy. So also the normal qualities and

functions of the three doshas are given in texts (*AHr. sūtra*, 1.41f: 11, 1-3), and departures from these are ascertained by the physician by observation and interrogation.

The aggravation of vāta is indicated by colours like black, blue or brown; by physical qualities like roughness hardness, dryness, non-stickiness and cold; by different kinds of pain (mild discomfort, cutting pain, crushing pain, intermittent pain, gnawing pain, tearing pain); loss of sensation, behavioural anomalies, digestive disturbances, astringent taste in the mouth, constipation, pain in defecation, meagre quantity of urine and faeces, scanty sweating, loss of sense-functions, delusions (moha), fears, depression, loss of sleep, and giddiness.

The aggravation of pitta is indicated by colours like red, yellow, smoky and green; by physical qualities like softness and viscosity; by actions such as burning sensation, increase and speed in activity, inflammations, ulceration, necrosis, fetid smell, increased metabolic rate, intensified digestive rate, bitter or pungent taste in the mouth, watery faeces, frequent defecation accompanied by burning sensation, copious and frequent urination with high colour, much sweat, lowered sensory functions, intoxication (mada) and delirium (pralāpa), emotional outburst, loss of sleep, and convulsions.

The aggravation of kapha is indicated by the prevalence of white colour; by physical qualities like hardness, moisture, stickiness; heaviness of body, coldness, itching, decreased and slow activity, non-inflammatory swelling, tumour, poor digestion, feeling of sweet or salty taste in mouth, excessive frequent and solid defecation, copious but infrequent urination, milky white in colour, scanty sweat, slowness in perception, apathy and lethargy, stupor (tandra), excessive sleep and desire for hot things.

The diminution (kshaya) of vāta is indicated by symptoms which resemble mildly

the symptoms of aggravation of kapha (slowness, apathy, coldness, debility). The diminution of pitta is characterized by symptoms such as feeling of chill, inadequate digestion, tremors and so on. The diminution of kapha is indicated by dryness, giddiness, palpitation and looseness of joints.

The task of the physician is to enhance the doshas that have become deficient, decrease the doshas that have been aggravated, and to preserve the normalcy of the doshas which are normal (*SS. chikitsā*, 33, 1-3; also cf *D.M.A.*, pp.16-22).²³

The doshas also move upward (ūrdhva-gati), downward (adhogati) or across (tiryak, transversely). The ascertainment of the direction is important inasmuch as the treatment procedure could be effectively decided upon. The doshas also move into the great channel or the alimentary tract (mahā-srotas or koshṭha), when disorders like fever, vomiting, dysentery, cough, hiccough, dyspnoea, abscess, abdominal tumour, and liver complaints, all of which are classified as internal diseases (ābhyantara-roga) are occasioned. Or they may move into the body constituents (dhātus, including skin) called 'śākhās', and create disorders called diseases with external pathways (bāhya-roga-marga), like piles, diseases of the skin, boils, goitre, obesity, moles and so on. Or the doshas may move into the joints and vital spots like the heart, head and abdomen (asthisandhi-marma, hṛdaya, śiras and vasti), causing diseases with the intermediate pathways, madhyama-roga-marga, like facial paralysis, diseases of the heart, diseases of the head, prolapse of the anus, joint-pain and tuberculosis. (*MK on M.N.* 1, 4, pp 8-9; cf. also *AE*, vol. II, Part III pp 13-14) [See DOSHA].

Dūta-Parikṣhā: Questioning the informant or messenger (dūta) provides clues as to the severity of the disease of the patient, and the chances of cure and recovery. The messenger is defined as one who is sent to bring the

physician (yaś chikitsakam ānetum yāti sa dūtah kathyate), and who is capable of answering the physician's questions regarding the patient's condition (gamanāya praś-nāya vā āgatah purushah, *NiS*, on *SS*, sūtra, 10, 4). 'Examination' in the context means close observation, prognostic inferences, and interrogation (cf. *AS*, śārīra, 12, 4-6).

AHr (śārīra, 6) has a separate section relating to 'the especial knowledge that can be obtained from the messenger' (dūtādi-vijñānam). If the informant or messenger belongs to the same religious belief (theist, atheist), the same status in life (celibate, married, mendicant or hermit), and the same caste (brahmin and so on) as the patient, then success in the physician's endeavour (karma-siddhi) is suggested. Even when this condition is fulfilled, if the messenger happens to be despondent, scared, in haste, harsh in speech, carrying a weapon or a stick, clean-shaven or with matted hair, deformed, wearing black, red, soiled, torn or wet garments, smeared with oil or dust, speaking of ill-luck, having an unlucky name, or riding a donkey, camel or buffalo, the indications are that the patient cannot be cured (1-5).

The messenger or informant must be related to the patient (sva-jñāti), must himself be in good health and cheer (sukhī), must be wearing clean and white garments, and alert (paṭu). He must approach the physician and stand in any direction except the southern (sajīva-diśi). If he comes on a good day of the week, and at an auspicious time, then the prognosis of the patient's disease is good (*SaS*, I, 9-10). However, if he sees good omens while he approaches the physician, it is not good for the patient; it will be good for the patient, if the messenger has bad omens (*ibid.*, 11).

If the informant or messenger comes while the sun is setting, if he is in pain, if his voice is hollow, and if tears fill his eyes, then the patient's illness cannot be cured (*YR*, 1, 27-28). The wise messenger will not approach

the physician at dawn, dusk, or night; if, when he comes, the physician is having his bath, eating his food, or engaged in sex, then it forebodes misfortune for the patient (*ibid.*, 29).

The messenger should smile when he approaches the physician, and inquire of his (physician's) health and welfare; and only then should he communicate to the physician information regarding the patient's condition. While he speaks, his voice should not be too low nor too loud. He should also carry some flowers and fruits to the physician (*HS*, 2;6).

The importance of the messenger is derived from the prescription that the physician should not visit the patient unless he is invited or summoned (vināhvānam na gacchet, *YR*, I, 30). It is not any one who is sent to call the physician can be described as a messenger, for there are some general requirements of a messenger. He must be intelligent and knowledgeable, capable of clear and truthful communication, fluent in the local language, and courageous (*CHĀNAKYA*, 206, *SKD*). The physician should be able to ascertain from him the precise condition of the patient's health.

The texts also mention that the messenger approaching a physician who is naked, lying on ground, answering calls of nature, or in a sorrowful mood, and whose hair is untied and untidy, does not hold out a good prognosis (*ĀDHAMALLA'S Dīpikā* on *SaS*, 1, 3, 9). If, while the messenger is speaking about the condition of the patient, there are unfavourable omens, it forebodes ill for the patient (*AHr*, śārīra, 6, 13). [See OMENS, DREAMS AS PROGNOSTIC AIDS]

E

Early Manifestations: [See PŪRVA-RŪPA].

Eight-fold Examination: Ashta-sthāna-parīkshā is the classical method of clinical examination employed in Āyurveda. It consists of the examination of the patient's (1) pulse (nāḍī), (2) urine (mūtra), (3) faeces (mala), (4) tongue (jihvā), (5) voice and sounds (śabda), (6) touch (sparśa), (7) sight (dr̥k) and (8) appearance (ākṛti) (the order given in YR. 35).

References to this cannot, however, be found in CS, SS or in AHR, although physical examination or examination by the five senses (mentioned in these texts) includes most of the details covered under the eight-fold examination. Examination of the pulse (nāḍī-parīkshā), which is regarded as of foremost importance was for the first time mentioned in *Śārngadhara-saṃhitā*, a work of the thirteenth century. Even this work does not mention the scheme of eight-fold examination. It is not until the fifteenth century that we hear of this. The first work of importance to describe this is *Yoga-ratnākara*, a compendium of medical wisdom and practice of the sixteenth century. In subsequent years, however, this became the standard plan of clinical examination. It is probable that it was adapted from the Siddha system of medicine, as a convenient substitute for examination by the five senses (pañchendriya-parīkshā), which was more ancient, more comprehensive and more elaborate. In fact, the ashta-sthāna-parīkshā is little more than an aspect of pañ-

chendriya parīkshā. [See EXAMINATION BY THE FIVE SENSES, THE SIDDHA SYSTEM OF MEDICINE].

(1) Examination of the arterial pulse (nāḍī) is counted as first among the eight aspects of clinical examination, and also as the foremost. Although not mentioned in the CS, SS or in AHR, it assumed considerable importance in Indian medical practice. In fact, it was the only examination that was most frequently resorted to by the Indian physicians until recent years. An elaborate literature has grown on this subject in Sanskrit, alongside the science of pulse as well as the art of reading the pulse [See NĀḌI, PULSE EXAMINATION].

It differs significantly in many respects from the pulse-examination current in Western medicine. The pulse is examined in India, as indeed the other seven conditions of the body noted above, for understanding the condition of the three doshas, vāta, pitta and kapha, and the disorders arising from them. While the expression nāḍī literally means any tubular structure, for purposes of examination it is taken to signify only arterial pulse (also called dhamanī).

Of the total number of nāḍīs in the body (three crores and a half), the nāḍīs at the wrist, at the ankle-joint, at the root of the neck, at the root of the nose, in front of the ears, inside the upper eyelids, under the tongue, and under the penis were considered as significant. However, it was only the nāḍī at the wrist (at the root of the thumb) that was frequently examined [See PULSE EXAMINATION]. Normality of the constitution, abnormal manifestations of the three doshas, the presence as well as severity of various diseases, good or bad prognosis, impending death, and possession by spirits are all said to be revealed by the correct reading of the nāḍī.

(2) Examination of urine (mūtra) was once elaborately and frequently conducted by the Indian physician, as can be gleaned by references to it even in the CS. It must have

been a prevalent practice until the sixteenth or seventeenth centuries, for we find fairly detailed accounts of this examination in works like *Yoga-ratnākara* (YR) and *Basavarājīyaṁ* (BSR). Latterly, however, its employment for diagnostic purposes became increasingly infrequent.

Besides observing with the eye the colour and consistency of the urine sample, the physician is also asked to examine with touch the warmth, coldness and stickiness, and to apprehend the normal or abnormal smell thereof. While the examination of urine by tasting was once practiced, it is no longer done; but the physician is asked to infer the sweetness in urine by observing its attraction for flies and ants.

(3) Examination of faeces (mala, purīṣa). A waste-product of the body (kiṭṭa), it is separated as waste from the nutrient portions (sāra-bhāga) of the food eaten during the digestive process, and needs to be eliminated. But before it is eliminated, it stays on in the body for some hours, during which time it provides strength for the avashṭhambhaka. Hence its importance.

In normal health food is properly digested and the faeces is well-formed (hard to touch, solid, saṁhata), in proper quantity (neither meagre nor copious), light in weight (floats when placed in water), slightly yellowish in colour, not too unctuous, and emitting foul smell. Ordinarily, it is discharged from the body twice in twenty-four hours; and the discharge is easy and comfortable (sukha-pravṛtti). Faeces is said to be properly digested (pakva) when the nutrient portion of food (ahāra-sāra) has been absorbed by the body, and only the waste (kiṭṭa) is left to be expelled.

But the normalcy of faecal production and bowel movement is disturbed owing to several factors, like nature and frequency of food, digestion, conduct, habits, weather, diseased condition of the body, disturbed state of mind, and so on. The abnormality is

revealed by the change in colour of the faecal matter discharged, its quantity, condition or shape, warmth or coldness, unctuousness and foul smell. Examination is conducted by sight, smell and touch. Additional information is obtained by interrogation (praśna).

When the faecal discharge is with frequent urges, hard, dry, broken into bits (scabellous), black or ashy in colour, coarse to touch and frothy, and when there is a constipated condition, the aggravation of vāta is suggested. When pitta is aggravated, then the faecal matter will be yellowish or yellowish-black in colour (sometimes green or black), watery in shape, foul-smelling, sometimes mixed with blood; evacuation may be accompanied with a burning sensation and the urge to evacuate will be frequent. In the aggravation of kapha, the faecal matter will be whitish, mixed with mucus and undigested food, without smell, and without urge to evacuate. When all three doshas are simultaneously disturbed, the faecal matter will be ashy or black in colour, cold to touch, exceedingly foul-smelling, and broken into bits; there may also be constipation (baddha).

Usually, when the faecal production has been excessive, the frequency of discharge as well as the quantity discharged is more than normal; the discharge is watery or semi-solid; the associated conditions are flatulence, heaviness of the stomach, and also pain. When, however, the production is deficient, the frequency of discharge is very much reduced (with constipation, vibandha), the amount discharged is very meagre, the colour will be tawny, the shape in which it is discharged will be scabellous; the associated condition is weakness (cf. CS, sūtra, 17, 70 and SS, sūtra, 15, 11-15).

When the digestive power is poor, the discharge will be watery and foul-smelling; when, however, it is abnormally intense, it will be dry and thin. With indigestion, the faecal matter will be foul-smelling, cold and

loose. In dropsy (jalodara), it will be whitish and exceedingly foul-smelling. In wasting diseases, it will be black in colour. When the faecal discharge turns very white, very black, deep yellow, or reddish or variegated in colour, becomes hot to touch, and frequent even when no food is taken, then the approach of death is indicated (cf. YR, 103-111).

(4) Examination of the tongue (jihvā) is an important detail. It is regarded as most significant after the pulse-examination. It is examined for its colour, coating, dryness or moisture (by observation) and the sense of taste (by interrogation). The normal tongue will be reddish in hue, thin, smooth and clear.

When the tongue is cold to touch, clear, rough in surface and tinged in colour, and is found to be tremulous, it shows a disturbance of the vāta dosha and the prevalent taste on the tongue will sweet or astringent. When the tongue is soft to touch, exceedingly smooth in appearance, dark red (acute inflammation) or yellowish in colour, it denotes the aggravation of pitta; the prevalent taste on the tongue in this case will be bitter or pungent. When the tongue is sticky and moist, rough in appearance and whitish in colour, it means that kapha has been aggravated; the prevailing taste on the tongue will be sweet or salty. When the three doshas have simultaneously been aggravated, the tongue will be blackish, dry and rough, thorny and heavily coated (yellowish).

Differences in the colour of coating are also recognized: it will be ruddy (the colour of the dawn) in the vāta disorders, yellowish in pitta disorders, and whitish in kapha disorders.

In indigestion, the tongue appears as if full of ghee, and when the digestive powers have been weakened, the taste on the tongue will be astringent. In respiratory disorders, it will assume a bluish tinge; and in fevers due to pitta or all three doshas, it will be very red in

hue.

When the tongue turns black, becomes exceedingly rough, and shrinks in size, the moribund condition is indicated (cf. YR, 112-114).

There is a view which is known as 'Nandikeśvara-mata' (cf. *Vaidya-sāra-saṁgraha*, (VSSK) Bangalore, 1882) which holds that excessive salivation indicates aggravation of kapha, bitter and pungent tastes on the tongue the aggravation of pitta, a dry tongue the aggravation of vāta, dry as well as thorny tongue the aggravation of all three doshas (saṁnipāta); and the tongue developing boils and assuming black or yellow colour indicates the incurability of the disease. In fever, the drinking water, food and the six tastes are not relished.

(5) Examination of the voice (svara or śabda) of the patient is not an important one, but has received considerable attention. The CS (vimāna, 8, 119) points out that voices of individuals differ according to their temperaments (sāra). But the normal voice (prakṛti-svara) is said to resemble the sounds produced by swan, crane, ruddy goose, sparrow, crow, pigeon, drum or a rattle. While the voice under physical or mental stress will resemble the bleating of a goat, it may be feeble and indistinct, choked, moanful or harsh; there may also be stammering or stuttering (CS, indriya, 1, 14). The CS also mentions changes in the voice when the patient is in a moribund condition (ibid., 24-25); the changes will be sudden and unnatural, and, more particularly, there will be multiple voices in the same individual.

The normal voice will be deep, resonant, firm, continuous, forceful, pleasant, and even-pitched. But change in voice in disease will be indistinct, restrained, discontinuous, interrupted, high-pitched and tremulous. It is harsh and unpleasant (CS, ibid., 14; SS, sūtra, 32-4; AHR, śārīra, 5, 39-40). Persons in whom kapha prevails will speak in a heavy and masked voice, while persons in whom

pitta prevails will speak clearly and distinctly; the persons in whom vāta prevails will speak in neither of the manners mentioned above (YR, 1, 115).

Under this category (that is, examination of voice) it is usual to include also other sounds produced in the body, such as noisy breathing, sneezing, yawning, cough, hic-cough, gurgling sounds in the intestines, flatus, and so on. Thus, this examination which was earlier called 'svara-parīkshā' (examination of voice) came in due course to be known as 'śabda-parīkshā' (examination of sounds).

(6) Examination of touch (sparśa) refers primarily to the body temperature of the patient that could be felt by the physician, but also refers to such details as roughness, sweat and complexion. While the early texts do not mention the pulse-examination (nāḍīparīkshā) under this head (it being given a independent status), it became more usual in later times to regard pulse-examination as an aspect of sparśakaha.

Body-temperature varies according to the aggravated doshas. When vāta is aggravated, the body feels cold to touch, and the body feels hot when pitta is aggravated; the aggravation of kapha, however, is revealed by the sweating of the body (YR, 1, 116). In vāta-aggravation, the skin also will be dry and rough, while in the kapha aggravation, it will be sticky.

The CS (indriya, 3, 4) has this to say about examination by touch: 'The physician who seeks to ascertain the health of the patient primarily by the means of touch, should touch (kevala = kṛtsnam) with his own hand in normalcy the patient's body, or if the physician's hand is not in its normal condition, make another normal person touch the patient's body. While so touching, the aspects (literally modes or bhāva) to be observed are (1) the cessation of movement or pulsation that should normally be going on in the body (like the pulse at the wrist, heart-

beats, lung movements, throbbing, at the neck), (2) the parts of the body which should always be warm becoming suddenly cold; (3) the parts of the body which are normally tender becoming hard; (4) the parts of the body which are normally smooth becoming rough; (5) the parts of the body ceasing to be present (becoming unusually minute, withdrawn or atrophied); (6) the joints becoming loose or slipped; (7) the muscles becoming stiff or relaxed, or filled with sweat; (8) stupefaction (or paralysis); and so on!'

(7) Examination of eyes (dṛk) is also said to reveal the prevailing condition of the three doshas. When the eyes of the patient are dry (rūksha), smoky (dhūmra), frightening (raudra), wandering (chala) and burning within (antar-jvalat), then the aggravation of vāta is indicated. When the eyes hate exposure to light (dīpa-dveshi), experience burning sensation (santapta), and are of yellowish colour (pīta), then the aggravation of pitta is indicated. When the eyes are filled with water (jalārdra), lack lustre (jyotishā hīna), then the aggravation of kapha is suggested (YR, 1, 117).

When two doshas are in an aggravated condition, then the symptoms specific to the doshas are mixed, and the eyes become fast moving. When all three doshas are aggravated (viz. samnipāta), the eyes become black in colour (śyāma), are deformed and sunk deep (nirbhugna), assume a frightening aspect (raudra), and become red (rakta) (YR, 1, 118).

If one of the eyes of the patient becomes terrifying in aspect (bhīma) and the other is closed, the physician will understand that the patient will die within three days. If the eyesight is lost all of a sudden (sahasā), or if the eyes become blackish in hue, the patient is not likely to survive. If the eyes appear filled with blood, or black in colour, and terrifying, the indication is that the patient will undoubtedly die. When the eyes begin to stare without blinking (eka-dṛṣṭi) and

become insensible (achaitanya), when the pupil of the eye is exceedingly tremulous owing to hallucinations (bhrama-sphurita-tāraka), it is certain that the patient will not survive that night (YR, 119-122).

(8) Examination of the entire appearance (ākṛti) is an important consideration. Appearance in the context includes the general physical condition of the patient as could be readily seen as well as his postures, habits and conduct. It is the totality of the patient's physical and mental make-up that comes in for examination here. The YR (1,123-131) deals with the constitutional peculiarities under the head of 'ākṛti-parīkshā'. The constitutional peculiarities are determined by the prevalence of one, two, or all three of the doshas, vāta, pitta and kapha.

(i) Among the three doshas, vata is most important, for it is pervasive, quick in action, strongest among the doshas, and independent of the other doshas; it excites the other doshas, and brings about a large number of ailments. Persons, who are predominantly vāta in constitution, are by nature wicked, short-tempered, talkative (given to idle-talk or gossip), incoherent in speech, weak of resolve, fickle in friendship, poor in memory, quick in action and movement, unsteady in gait, and incapable of attention or steadiness of posture; they are averse to cold things, and are usually warmly clad; their hair is brittle, split, ashy grey in colour; their body also is ashy grey in colour, and rough to touch.

(ii) Pitta, being fire in nature or born out of fire, makes the person in whom it is predominant exceedingly thirsty and hungry; his body will be yellowish in colour and warm to touch, his face being copper-coloured as also his palm and soles of the feet; he is courageous, intelligent, brilliant in talk, fearless and arrogant; his body-hair will be sparse and golden coloured; he is generous to friends, but harsh towards enemies.

(iii) The person in whom kapha predominates, will be cool like the moon (for kapha

shares the lunar characteristics), his bone-joints will be well hidden, bone unctuous, and muscle well-knit; he can bear without much trouble hunger, thirst, pain, cold and sun; he is generally gentle in conduct, intelligent and truthful. His eyes will be whitish, but hair dark and wavy; his body is lustrous, well shaped, and oily; he can endure stresses; he is courteous, especially towards elders.

The particular dosha will not harm a person in whom it is predominant, even as the insect born in poison will not be affected by the poison (YR, 1, 123-131).

Emesis Therapy: [See VAMANA-KARMA].

Enemata Therapy: [See VASTI-KARMA].

Errhine Therapy: [See NASYA-KARMA].

Examination of the Mouth: When vāta is aggravated, the mouth tastes sweet; when pitta is aggravated, it tastes bitter; and when kapha has been aggravated, it tastes sweet and salty. When all three doshas have been disturbed, the foregoing tastes are mixed. In indigestion, the mouth tastes as if ghee has been put in it; and in weakness of the power of digestion, it tastes astringent (MOREŚVARA, *Vaidyāmṛta*, Madras 1880, p. 28).

The examination is done by observation.

Examination of the Power of Digestion: An important aspect for consideration of the disease and of the patient is the power of digestion which is examined by the capacity to eat or ingest (abhyavaharaṇa) and the capacity to digest (jaraṇa) what has been eaten (CS, *ibid.*, 120). This is also called the 'examination of the (digestive) fire' (agni-parīkshā, SS, sūtra, 35, 24).

Food is regarded as the single most important factor that sustains the body (deha-dhāraka), and functions as the source of strength (bala), life (āyuh), lustre (tejas), energy (samutsāha), attention (smṛti) and

vitality (*ojas*) (*CS* and *SS*). It is important, therefore, that the food is properly digested as health is directly related to digestion.

Individuals differ in their power of digestion. The *SS* (op.cit.) classified the digestive power into four groups: (1) individuals in whom the doshas are in state of balance (*dosha-anabhipanna* or *sama*) and have the proper measure of digestive capacity; (2) individuals in whom the doshas have been disturbed (*vikriyam-āpanna*) have irregular digestive power (*vishama*) caused by the aggravation of *vāta*; (3) digestion is intense (*tīkṣṇa*) when caused by the aggravation of *pitta*; or (4) it is dull (*manda*) when caused by the aggravation of *kapha*.

Irregular digestion is when the individual is able to digest properly at times, but suffers from distresses like feeling of heaviness, bloated stomach, intestinal rumblings, pain and dysentery, at other times. Intense digestion is when the individual eats a large quantity of food, and can digest it quickly; this disorder in its advanced condition is called '*atyagñi*' (where the food eaten is soon reduced to 'ash', and does not help in nourishing the body). Dull digestion is when even the little food that is eaten takes a long time to get digested and in the meantime produces distresses like heaviness of the stomach, headache, cough and hiccup.

Examination is done by interrogation.

Examination of *Sātmya*: '*Sātmya*' refers to the agreeability, suitability, or wholesomeness, of food, drink or conduct, because one has become habituated to it as a result of long and continuous use (*oka-sātmya*; *oka* is *abhyāsa*), even though it may be inimical to one's constitution and generally forbidden (like sleep during daytime) [See *SĀTMYA*]. The food, drink or conduct that is thus rendered suitable to the constitution depends upon the nature of the place one lives in, the needs of that particular climate, the diseases the individual usually suffers from, seasonal require-

ments, necessities, customs in vogue, beliefs, and so on.

The aspects and details of *sātmya* with regard to a patient have to be examined by the physician before he arrives at a diagnostic decision or launches on a treatment procedure. The habituation to certain articles of food or drink, and to certain modes of behaviour on the part of the patient may have an impact on the nature and severity of disease as well as the drugs and the treatment procedures. What the body and mind have got used to should not be disturbed as far as possible; the drugs administered must be complementary in character to whatever has already been 'of one essence with nature' of the patient's constitution.

Those who have become habituated to articles of food like ghee (clarified butter), milk, oil, or mutton-soup, and those who are used to all the tastes (sweet, bitter, pungent) are stronger in constitution, are capable of enduring hardship, and are usually long-lived (cf. *CS*, *vimāna*, 8, 118).

It is usual to distinguish between the suitability of food, drink, or conduct with regard to the place of residence (*deśa-sātmya*), the suitability with regard to one's physical constitution (*deha-sātmya*), and the suitability with regard to the individual's ailment (*vyādhī-sātmya*, *Vaidyasāra-saṁgraha*). Individuals differ according to their '*sātmya*' being superior (*pravara*), inferior (*avara*) or moderate (*madhya*). The first have great powers of endurance and live longest, while the second have very meagre powers of endurance, and live but briefly; and the third are moderate in their powers of endurance as well as span of life (*CS*, op.cit.).

The examination is done by questioning the patient.

Examination by the Sense-Organ: Under direct examination (*patyaksha*), the physician is advised to employ all his sense-organs (to the exclusion of taste) to obtain informa-

tion concerning the objects of the senses. (1) vision to observe visible details such as colour and complexion (*varṇa*), general physical appearance (*saṁsthāna*), relative proportions of the limbs (*pramāṇa*), lustre and brightness of face (*chhāyā*), the normal appearance and the abnormalities of the body (*śarīra-prakṛti-vikārān*) and many others not enumerated here (like movement, behaviour and so on).

(2) audition to observe audible details such as sounds from inner cavities (*āntra-kūjanam*), sounds at the finger-joints (*sandhi-sphuṭanam aṅguli-parvāṇam*), peculiar modulations of the voice (*svara-viśeṣa*), and so on; (3) touch by the hand (palpation) to obtain information concerning the normal and abnormal tactile details such as heat, cold, sweat, movement, pulsation, hardness and so on; and (4) olfaction to observe the smells of various kinds pertaining to the bodily constituents, and the effetes, discharges in the body of the patient.

The gustatory observation (employment of tongue), however, is prohibited for the physician; he may obtain relevant information concerning tastes from other sources. (cf *CS*, *vimāna* 5, 7).

Examination of Strength: The physical strength of the person (*bala*) is examined in order to assess his capacity to endure the stress of illness, to respond favourably to the treatment, and to recover fast and completely. The strength of the person cannot be properly estimated by looking at his body; it cannot be said, for instance, that the fat man is strong, or that the lean person is weak, for it is seen in life that lean and emaciated persons are often very strong (*CS*, *vimāna*, 8, 115). Therefore, the examination of physical strength is to be conducted on the basis of constitutional differences (*sāra*, signifying the prevalence of one or the other of the eight body-constituents (*CS*, *ibid.*, 8, 102).

Individuals in whom all the body con-

stituents as well as the mental factor are equally 'prevalent' are very strong, happy most of the time, capable of enduring discomforts and distresses, confident in all undertakings, and optimistic in outlook; their physical constitution is firm and composed, their gait steady, their voice resonant and pleasant; their disorders are few and mild; they age slowly and are long-lived; and usually they are endowed with happiness and prosperity (*CS*, *ibid.*, 111).

This is also called the examination of the power of exercise (*vyāyāma*), the amount of physical exertion that the patient is capable of. Inferred from this capacity are the three degrees of strength—superior (*pravara*), moderate (*madhya*) and inferior (*avara*). Strength is again classified into three varieties (1) natural (*sahaja*), or the strength that the body and mind are together capable of, owing to the constitution; (2) function of time (*kālaja*), that is, the strength that depends upon seasons and the period of life; and (3) function of deliberate effort (*yukti-kṛta*), which means the strength that comes from nourishment and conduct (*CS*, *sūtra* 11, the expression 'yukti' here has been used in the sense of *bhoga*, *yujyate iti*).

External Causes of Disease: Factors which are outside the individual may cause disease, in which case they are called external or outside causes (*bāhya-nidāna*). *TISAṬA* provides examples of behavioural anomalies (like excessive exercise, fall from height, broken limbs, keeping awake during night, suppression of natural urges, extreme cold, and great fright), improper food (*āhāra*) and seasonal variations (*kāla*) (quoted in *MK* on *MN*, 1, 4).

This is distinguished from internal causes of disease (*ābhyantara*). [*See NIDĀNA, AETIOLOGY CLASSIFICATION*].

Eye-examination: The changes in the eyes reveal the disorder of the doshas. When *vāta*

is more prevalent than the other two doshas, the eyes are dry, unsteady, sunken, pink or smoky in colour, and frightening in aspect. When it is pitta that has been disturbed, then the eyes are yellow or red in colour, dirty, piercing and averse to light. When kapha has been aggravated, then the eyes are whitish and glistening, they are watery and devoid of lustre; vision tends to be fixed.

The nature of the eyes in the advanced stages of illness indicate how imminent death is for the patient. When one of the eyes is frightening in aspect and wide open, while the other is closed; when the eyes do not see even while open; when the eyes have become deformed and sunken; when the eyes have assumed a terrifying look or are exceedingly tremulous, the disease that the patient is suffering from is incurable. When the eyes assume a slightly blackish hue and are suddenly deprived of lustre, then the indication is that patient has approached his end. The signs of imminent death are most often the frightening look (*raudram prekshate*), deep red (*rakta*) or blue-black (*kṛṣṇa*) colour. (MOREŚVARA'S *Vaidyāmṛta*, Madras, 1880, p. 25-28).

The examination is done by observation. [See EIGHT-FOLD EXAMINATION].

F

Five-fold Therapy: [See PAŇCHA-KARMA].

G

Gandharva-Sattva: A personality type of the patient, characterized by traits distinguishing the mythic denizens of the celestial regions, who are proficient in music and dance, the *gandharvas*. They are attributed with a fondness for music and other fine arts, proficiency in forms of entertainment, a love of luxury, engaging looks, delight in the company of women, and a love for sports. The type belongs to the 'sāttvic' group of people who are generally healthy, long-lived, and happy. [See PERSONALITY OF THE PATIENT].

H

Health Indicators: Health, being defined as the balance of the body constituents (*dhātu-sāmya*) is a dynamic concept. Its function is to counteract possible disturbance (*vikāra*, disease). The state of health is indicated by the following factors: (1) ability to suppress pain, (2) normal voice and complexion; (3) well-nourished body; (4) possession of bodily strength and enhancing it; (5) appetite for normal food; (6) hunger at the time when food is normally taken; (7) complete and timely digestion of food taken during the time when food is normally taken; (8) getting sleep at the time one usually goes to

sleep; (9) absence of morbid dreams, when asleep; (10) waking up in the morning refreshed and with a pleasant feeling; (11) proper and timely elimination of urine, faeces and semen; and (12) normal functioning of mind and the sense-organs (CS, vimāna, 8, 89).

The purpose of treatment is to restore these aspects of health.

I

Immediate Causes of Disease: There are some factors which are immediately causative (Samnikṛṣṭa or nikṛṣṭa) of the derangement of the doshas; they are instantaneous in their causation, and do not depend upon stages of the accumulation (chaya) of the doshas. Improper food, or food at times is an example. The period of night or day or seasonal variation which characteristically excited one or the other of the doshas is another factor (naktam-dina-ṛtu-bhuktām-śah doṣha-prakopāsyā hetavah; ne te chayādikaṁ apekshante (cf. *MK* on *MN*, 1, 4; also *Sarvāṅga-sundara* on *AHr*, nidāna, 1, 2).

This is one of the four types of causes mentioned by HARICHANDRA in *Upakalpanīyadhyāya*, the other three being remote (viprakṛṣṭa), abortive (vyabhichāri) and potent (prādhānika). [See NIDĀNA, AETIOLOGY CLASSIFICATION].

Inclusion: Regarded as a secondary means of valid knowledge, inclusion or saṁbhava is the comprehension of the constituent by an aggregate (samudāya). More explicitly, it is the knowing of the existence of a detail as a

result of grasping the existence of a bigger whole which cannot exist without the part (avinābhāvi). The example given is the apprehension of the existence of an āḍhaka (a weight which is quarter of a droṇa) from apprehending the existence of a droṇa; and the apprehension of the existence of a prastha (weight equal to the quarter of an āḍhaka) from apprehending the existence of an āḍhaka. [See ANCIENT WEIGHTS AND MEASURES].

The illustration provided by the Vaiśeṣika writer Śrīdhara is: The number 100 is known to exist through the knowledge that a 1000 exists, for 100 is inseparably connected with 1000. Because of the role of this inseparable connection (avinābhāvitatvāt), PRASASTAPĀDA holds that this reasoning by inclusion is neither more than nor less than inference (anumāna).

The CS (vimāna, 8, 49) includes this source of knowledge under logical terms useful in debates: something which is apprehended from apprehending something else; in other words, something which is in the nature of the source for another. The examples given are the six body constituents for the embryo; unwholesome regimens for disease; and wholesome regimen for health.

Infectious Diseases: The SS (nidāna, 5) describes infectious diseases (aupasargika), the contagion of which is communicated from person to person (saṁkrāṁanti naram naram) by repeated (prasaṅgāt) body contact, inhalation of the patient's breath, eating with him, sleeping on the bed with him, and using flowers and clothes used by him (SS, op.cit., 33). Among the infections mentioned here are leprosy (kushṭha), fever (jvara), pulmonary consumption (śoṣha), and ophthalmia (netrābhishyanda, ibid., 34).

Inferential Reasoning: [See ANUMĀNA].

Informant as Prognostic Aid: The informing

messenger (dūta) is one who, as a relative of the patient, is concerned with his welfare, and comes to invite the physician to visit the patient. His appearance, dress, mood, speech, and the time of his arrival as also the omens seen at that time are analysed for the clues they offer to good or bad prognosis. [See DŪTA-PARIKSHĀ].

Internal Causes of Disease: Factors which are inside the individual causing disease are known as ābhyantara-nidāna. The two sets of factors are disturbances of the doshas (vāta, pitta and kapha), and the constituent parts of the body which bear the impact of the disturbed dosha (dūshya). The doshas, being dynamic, are influenced by seasonal variations: in spring kapha is disturbed, in autumn pitta, and in the monsoon vāta. But this disturbance is normal (prākṛta), and may not cause disease. When, however, in spring pitta or vāta gets disturbed, or in monsoon kapha or pitta, or in autumn kapha or vāta, it is abnormal (vaikṛta), and will cause disease.

This is distinguished from the external causes of disease (bāhya-nidāna), which could be food, behaviour and period of day or year. [See NIDĀNA, AETIOLOGY CLASSIFICATION]

Internal Medicine: [See KĀYA-CHIKITSĀ].

Interrogation: Interrogation (praśna) is regarded as one of the diagnostic aids by CS (vimāna, 4, 8 and chikitsā, 25, 22), and SS (sūtra, 10, 4 and 5). It is prescribed as a method of examination (parikshā), along with observation (darśana) and palpation (samsparśa) (darśana-praśna-samsparśaiḥ parikshā trividhā matā). Observation provides the physician with external details of age, complexion, bodily appearance and sensory acuity of patient; palpation provides information about the softness of the body, coldness and so on; but details such as the aetiology (hetu), pain (ārti), homologation

(sātmya), and digestive power (agñibala) are obtained by questioning the patient (CS, chikitsā, 25, 22 and 23). The last mode of examination involves pertinent and intelligent interrogation on the part of the physician, hence the expression "by the wise one" (CS, op.cit., 23).

The CS (vimāna, 4, 8) illustrates the value of interrogation by pointing out that details like costiveness or laxity in sprue syndrome, dreams, desire or aversion for food, likes and dislikes, happiness or unhappiness can only be obtained through questioning.

The SS (op.cit., 4) opposes the view that adequate modes of examination are three (tribhiretaiḥ vijñānopāyairōgāḥ prāyaśo veditavyā ity eke; tat tu na samyak. NiS tribhi stands for darśana-sparśana-praśnairōgāḥ), and prefers the six-fold examination which employs the five modes using the five senses, and the sixth by interrogation (shadvidho hi rogānām vijñānopāyāḥ; tadyathā pañchabhiḥ śrotṛādibhiḥ praśnenā cheti). By interrogation is to be obtained particulars like the place (deśa), time (kāla viz. season and period of life or age), caste (jāti), ameliorating articles of food or practices (sātmya), aggravation of pain or suffering (ātaṅka), origination of disease (utpatti), strength (bala), digestive power and appetite (antaragni), the stoppage or discharge of urine, faeces and so on. (vāta-mūtrapurīṣhādīnām pravṛttim apravṛttim cha, SS, op.cit., 5).

J

Jalaukya-vidhi: [See APPLICATION OF LEECHES].

K

Kaubera-sattva: A personality type of the patient, characterized by traits distinguishing the mythical god of wealth and the holder of treasures, Kubera: He is type-cast as loving comfort and pleasures, having social involvement with friends, attendants and dependents, keen sense of prestige, position and wealth, purity of conduct, readiness to show happiness or anger, benevolence, and non-attachment to persons or things. This type belongs to the sāttvic group of people who are generally healthy, long-lived, and happy. [See PERSONALITY OF THE PATIENT].

Kāya-chikitsā: One of the eight branches of Indian medicine (ashtāṅga-āyurveda), it refers to what is generally called internal medicine, dealing with physical and mental diseases of adults, which do not require surgical intervention or magical rites. The example of the diseases tackled under this head are fever, dysentery, haemoptysis, insanity, epilepsy, hysteria, urinary disorders, skin ailments, and so on (SS, sūtra, 1, 3).

The expression 'kāya' generally means body, the physical constitution. Etymologically, it is explained as the aggregation of parts which reveals a unitary form (kāyate prakāśate iti, mūrtih). Alternately, it is suggested that it refers to the individual's psychophysical existence which is evidenced by the constant sound (dhuk) which is heard inside the body when one plugs his ears with his fore-fingers (aṅgula-pihite karṇa-yugale dhuk iti śabda-śravaṇāt kayatīti).

Further, this internal sound (dhuk) is associated with the fire that burns within

(viz: jāṭharāgni), or the vital heat that pervades unceasingly the entire body while alive. Thus kāya is taken to refer to this internal fire (jāṭharah prāṇinam agniḥ hāya ity abhidhīyate, BHOJA). Treatment of the disorders of this vital principle is said to be the main concern of this branch of therapeutics.

Treatment here, as in other branches of Indian medicine, presupposes the dosha (vāta, pitta, kapha) ideology. When the doshas are balanced, there is health; when the balance is tipped, there is disease. The tipping of the balance may involve one, two, or all three doshas; there may be weakening or excitation of the doshas. Therapy consists in activating or reinforcing the weakened doshas, pacifying the excited or aggravated ones, and maintaining the status quo of the doshas which are proper (kṣhīṇāḥ vardhayitavyāḥ, vṛddhā hrāsaitavyāḥ, samāḥ paripālyāḥ). All treatment is meant to maintain or restore the balance of the three doshas (pravṛttir dhātu-sāmyārtha chikitsa; CS, sūtra, 9, 5).

The treatment consists mainly in the elimination of the causes of such imbalances in the doshas (nidāna-parivarjanam) by way of internal cleansing of the physical constitution (saṁśodhana) and the general soothing of the doshas (saṁśamana, CS, vimāna, 7, 30). The two methods together constitute what is known as internal purification (antaḥ-parimārjana). They comprise the five therapeutic and prophylactic procedures [See PAÑCHA-KARMA] under the former method, and seven curative techniques under the latter method [See SAṂSAMANA].

While this internal purification is conducted through emesis, purgation, enemata, insufflation, drugs, diet, and regimen, external purification (bahih-parimārjana) treats disease by external applications like oleation, bath, massage, medicated gargle, fomentation. The latter also is included in Kāya-chikitsā, but the third treatment procedure, surgical intervention (śastra-

pranidhāna, CS, sūtra, 11, 55) is excluded from its scope. [See THREE METHODS OF TREATMENT, SAMSAMANA, SAMŚODHANA].

Kriyā-Kāla: The expression signifies the stages in the course of a disease. Six stages are enumerated, and their knowledge is said to be indispensable for the physician (SS, sūtra, 21, 36). All diseases being caused by the vitiation of the three doshas (vāta, pitta and kapha), which have their own locations in the body (cf. SS, ibid., 3-17) [See DOSHA]. The course of the disease is said to begin with the accumulation of the vitiated doshas in their respective places. Then it proceeds to assume the specific form of a disease characterized by a syndrome (a pattern of signs and symptoms) [See RŪPA]. It then naturally subsides (bheda) or takes a serious turn. These several stages in the course are functions of time, and therefore they are designated 'kālas' (time-units) of the activity of the doshas (kriyā); they are also called avasthās or phases. They represent stages alike of the disease and of the treatment.

(1) The initial stage in any disease is the accumulation or stagnation (chaya or samchaya) of the dosha in its own location, owing to some cause or condition (etāni khalu dosha-sthānāni; eshu sañchayante doshā, SS, ibid.) The dosha in this condition will not flow freely in the body. It is the inception of the disorder, or what may be called the stage of incubation. The reason of such accumulation may be seasonal variation, or untimely food, or inimical action. In this stage, there will be mild symptoms like feeling a fullness in the abdomen (in the case of accumulation of vāta), dullness of body heat, or yellow colour (in the case of accumulation of pitta), feeling of heaviness in the limbs and lethargy (in the case of accumulation of kapha).

If care is taken to remedy the disease at this stage, it is possible that further stages will be prevented. Although the symptoms are mild and vague, a clever physician can at once

determine the aetiology, and prevent the spread of the disease in the body. Hence NiS (on SS, sūtra, 21, 18) describes the stage as the stage where primary treatment is indicated (ādyā-karmāvasara).

(2) The second stage is described as agitation, provocation, or excitation (prakopa). The dosha accumulation in its own location, and thus prevented from free circulation, if not redressed spontaneously or by treatment, gets excited (prakopam āpadyate). Behaviour such as violent exercise, excessive indulgence in sex, running or riding for a long time, swimming, fasting, keeping awake at night, carrying weight, suppression of natural urges and so on helps to agitate the vāta that has been accumulated; this particular dosha is naturally aggravated during winter, rains, windy days, cold days, in the morning and evening, and when food has just been completely digested.

The dosha pitta is aggravated by factors such as grief, fear, anger, fatigue, fasting, unnatural sexual gratification, certain foods (pungent, acid or saline tastes, sesamum, fish, goat's meat, curds, wine and so on) and exposure to sun. It is also naturally aggravated in summer, autumn, noon, midnight, and while the food is being digested.

Kapha is aggravated by day-time sleep, laziness, inactivity, certain foods (heavy, oily, sweet, sugarcane, flesh of aquatic birds and animals, bulbs and tubers, contrary foods and so on); its natural aggravation is during spring, in the morning and in the evening (SS, sūtra, 21, 19-24).

The factors which aggravate pitta also tend to aggravate blood. Additional factors are frequent eating, eating before food eaten earlier is digested, eating food-articles which are incompatible, indigestion, sleep during daytime, anger, exposure to heat (sun or fire) and physical exertion (SS, op.cit., 25-26). The vitiation of blood is invariably associated with the vitiation of other doshas.

Symptoms at this stage of provocation

(which is also the second stage of treatment) are pain, movement of wind in the bowels, acid eructations, thirst, burning sensations, aversion to food, vomiting, and nausea.

(3) The third stage is described as overflow or spread (*prasara*) of the vitiated doshas (by extension or expansion), owing to the action of *vāyu* (characterized by *rajas*). The simile given here is that of a stretch of water swollen by wind overreaching the dams, and getting into the other (formerly separated) stretches of water and flowing on all sides (SS, op.cit., 28). The vitiated doshas, sometimes in isolation, at other times in pairs, at still other times all three simultaneously or in association with the blood, spread in a variety of directions all over the body (*anekadhā prasaranti*).

The number of possible 'spreads' is given as 15: (i-iii) the spread of the three doshas separately, (iv) the spread of vitiated blood; (v) the simultaneous spread of *vāta* and *pitta*; (vi) the simultaneous spread of *vāta* and *kapha*; (vii) the simultaneous spread of *pitta* and *kapha*; (viii) the simultaneous spread of *vāta* and blood; (ix) the simultaneous spread of *pitta* and blood; (x) the simultaneous spread of *kapha* and blood; (xi) the spread of *vāta*, *pitta* and blood together; (xii) the spread of *vāta*, *kapha* and blood together; (xiii) the spread of *pitta*, *kapha* and blood together; (xiv) the spread of *vāta*, *pitta* and *kapha* together, and (xv) the spread of *vāta*, *pitta*, *kapha* and blood together (SS, op.cit., 28).

The derangement of the doshas and the blood spreads at this stage to other organs and parts of the body, thus affecting the body as a whole. Like the rain-bearing clouds, bursting out into a torrent of rain, the aggravated and overflowing doshas cause diseases.

If *vāta* is the principal dosha involved, the symptoms may be swelling or distention of the abdomen, and rumbling intestinal sounds; if it is *pitta*, then excessive heat in parts of the body or in the entire body, burn-

ing pain and a sensation of radiation or evaporation of heat from the surface; and if it is *kapha*, when aversion to food, inertness of limbs, disturbance of digestion, and spells of vomiting.

(4) The stage of localization or limitation of the aggravated and overflowing doshas in specific sites (*sthāna-samśraya*) is characterized by the specificity of diseases, or the specificity of parts or organs of the body (*śārīra-pradeśa*) that are affected. The doshas, while spreading out, harbour in parts of the body which are particularly favourable to the reception of the disordered dosha. It is this stage that justifies the taxonomy of diseases, for it is tantamount to the clinical manifestation of symptoms described as *pūrva-rūpa* (*prodromata*), (SS, op.cit., 33, *pūrva-rūpagateshu*, also *pūrvarūpam eva sthāna-samśrayam*).

When the site that is susceptible to localization is the abdomen, then the diseases that occur are internal abscesses, abdominal dropsy, impaired digestion, constipation and dysentery; if it is the bladder, then urinary disorders, stone in the bladder, stricture of urethra, retention of urine; if it is the penis, then syphilis, local inflammation, phimosis; if the adipose fat, then aneurism, scrofula, tumour, goitre; if the lower extremities, then elephantiasis etc. If, however, the spread is over the entire body, then the diseases are those that affect the whole body (like fever) (SS, op.cit., 33) [See *PŪRVA-RŪPA*].

(5) The stage subsequent to the above is the stage of the appearance of a specific disease (*vyādher darśanaīm*), or symptoms and signs of a fully developed disease (*vyakti*) are manifested corresponding to the '*rūpa*' (*NiS.*, *pravyaktaīm rūpam vyaktih*) [See *RŪPA*]. Instances are swelling, tumour, aneurism, abscess, fever, diarrhoea (SS, op.cit., 34).

(6) The stage showing a marked difference, an interruption, or a bursting out (*bhedā*) is the final one in the pathological

course. It is illustrated by the bursting open of an abscess or tumour and the assumption of the characteristics of an open wound (vrana, SS, op.cit., 35). At this stage, the disease is either arrested, that is, it subsides having run its course or is interrupted by the natural forces of the body; or becomes chronic (dīrghakālānubandha) and complicated. In the former case, there is no further development of the disease, whereas in the latter case, the disease may turn out to be incurable unless properly remedied (aprakriyamāne asādhyatām upayanti, SS, op.cit., 35).

Kshāra-karma: [See CAUSTICS].

L

Lakṣhaṇa: [See SYMPTOMS].

Laṅghana: One of the six preparatory treatments [See UPAKRAMA], it is essentially designed for reducing the body bulk (lāghavāya yat, AHR, yat-kiñchit lāghava-karam dehe, CS, sūtra, 22, 9). The expression literally means 'jumping', 'leaping'; the suggestion being the ability to do so, or agility. It is also called 'apatarpaṇa'.

Laṅghana is employed in three different senses: in the sense of fasting or starving (upavāsa) prescribed as a therapeutic measure (SS, sūtra, 46; CS, sūtra, 22, 18); intake of light or liquid food or diet (laghu-bhojana, easily digestible food); and any treatment which has the effect of making the person feel light (CS, sūtra, 22, 9) like exercises (vyāyāma), administration of digestive drugs (pāchana), exposure to sunlight (ātapa).

Laṅghana employed for the purpose of cleansing the constitution is called śodhana-laṅghana, and includes four modes of treatment: administration of emetics (vamana); administration of purgatives (virechana); administration of decoctions of drugs as enemata (nirūha-vasti, or āsthāpana-vasti) for cleansing the intestines; and administration of medicines (in the form of snuff or liquid) into the nostrils (nasya-karma or śirovirechana) to relieve the congestion in the head or to cleanse the nasal passage.

Besides the above four, the other methods of cleansing the constitution are administration of digestive drugs or articles of food rich in the two elements vāyu and agni (pāchana), by fasting (upavāsa), exercise (vyāyāma), exposure to sunlight (ātapa), exposure to fresh air (māruta), and abstaining from drinking water [See SĀMŚODHANA].

The familiar pañcha-karma treatments are all classed as laṅghana in effect, though one of the treatments, administration of medicated oils as enemata (anuvāsana-vasti), is more strictly a treatment for promoting bulk of body, that is, Bṛmhana as opposed to laṅghana. It may be pointed out that the anuvāsana-vasti is administered to antidote the vitiation of vāta (mārutagṇam, CS, sūtra, 2, 14; mārate hantavye anuvāsanam prakalpyam, Chkp.) and is therefore a śamana or soothing treatment just as the other four in the pañcha-karma are [See PAÑCHA-KARMA].

Leeches: [See APPLICATION OF LEECHES, BLOOD-LETTING].

M

Matsya-sattva: A personality type of the patient, characterized by traits distinguishing the aquatic animal, a fish (matsya), lower in the scale of evolution than the beasts of burden: timidity, absence of intelligence, unsettled thoughts, passionate interest in food and sex, cruelty, deceit, selfishness, uncontrolled anger or craving, foolishness, and quarrelsome nature. This type belongs to the tāmasic group of people who are generally dull, apathetic, ignorant, dejected, and confused. [See PERSONALITY OF THE PATIENT].

Mental examination: It is an important detail of the ten-fold examination of the patient's constitution in health as well as in disease. Mind is here called 'sattva' (sattvam uchyate manah, CS, vimāna, 8, 119), and is described as the organizer of the body (śarīrasya tantrakam, ibid.). The mind is explained by the commentator (CHKP) as that which initiates all action in the body (preraka) and which sustains the body during the life-time (dhāraka).

It is one of three kinds in the individuals: superior (pravara), middling (madhya) and inferior (avara, CS, op.cit.). Individuals thus belong to one or the other of these three types (sāra), called superior, middling or inferior. The first of these is characterized by the unalloyed prevalence of the 'sattva-guna', responsible for intelligence, virtue, wisdom, memory, courage, calm, endurance, and so on. The individuals with this trait are usually immune to illnesses and have power to endure stresses and

hardship cheerfully (mahatīshv api pīdāsv avyathā dr̥śyante, CS, ibid.). The excellence of the mind will prevent diseases (physical), and will enable the patient to respond favourably in case diseases do afflict him, even though his physical constitution is frail (CS, ibid., svalpa-śarīrāhy api).

The second type is characterized by the prevalence of the 'rajo-guna', which is responsible for energy, action and emotions. The individual with this 'guna' on the ascendent will usually be excessively active, unsteady, passionate, and timid; he may even be cruel, arrogant, lustful and irritable. He is not easily prone to sickness, but he is not immune; and when he does fall ill he suffers much, and does not respond to treatment too favourably.

The third type is characterized by the predominance of 'tamo-guna', which is responsible for inactivity, depression, ignorance, worry and evil conduct. The mind in people belonging to this type is poorest in quality. They are prone to fall ill too easily; and when they are ill they suffer for a long time. Even slight troubles are magnified in them. They do not respond favourably to drugs and treatment procedures; in fact, they may get worse as a result of treatment (CS, ibid.).

The examination of mind is conducted by observation, inference and interrogation. [See SATTVA, GUNA, SĀMKHYA].

Messenger as prognostic aid: [See DUNA-PARĪKSHĀ].

Minor treatment methods: Minor methods of treatment include irrigating the urethra or vagina by means of medicated ghee and decoctions (uttara-vasti), inhalation of the smoke of drugs (dhūmāpana), gargles (gaṇḍūsha), placing and fixing a hollow bag on the head filling it with medicinal fluid and allowing it to remain there for some time (śiro-vasti), application of medicinal

collyriums (aṅjana), application of eye-drops (aśchotana), application of plaster (biḍalaka), application of heat through fomentation (puṭa-pāka), application of medicated cotton sponges (picha), and filling the ear (karna-pūraṇa). (*Āyurveda-sikshā*, Vol. 5, Sec. 2, Ch. 1, p. 7).

N

Nādi-parīkshā: Examination of the pulse (nāḍī, principally the radial artery) is included in the eight-fold examination (aṣṭa-sthāna-parīkshā) which gained currency during the middle ages. Not mentioned in the *CS*, *SS* or *AHr*, it became popular practice after *SS* and *BP* prescribed it. [See PULSE EXAMINATION, EIGHT-FOLD EXAMINATION].

It is different from the pulse examination in European medical practice where the pulse (usually the radial artery running superficially at the wrist, and rarely also the carotid artery behind the knee and the posterior tibial artery at the ankle) is felt for rate, rhythm, volume and character, giving an idea about the condition of the circulatory system, especially the heart. In this practice the pulse is a little more than the change of pressure within the artery that occurs with each heart-beat. But in Indian medical practice, the pulse is the "witness of the living processes" (jīva-sākshinī), and its examination helps the physician ascertain not only the totality of all the vital functions of the patient's body (including mind) at the time of examination but also its trends in the future.

The assumption is that the nāḍī pulsates characteristically differently under the influ-

ence of one, two, or all three of the doshas (vāta, pitta and kapha). The ascertainment of these differences is of great value in diagnosis as well as prognosis. "The sum-total of whole impression that the physician acquires, through the degrees of abnormality that exists in the vitiation of vāta, pitta and kapha helps the physician to estimate the prognosis... The investigation is used chiefly to ascertain the deranged dosha or doshas to the extent to which they are respectively deranged, and also to forebode any complications or impending death." (*AE*, vol. II, part III, p. 37).

When the pulse is examined, it involves the physical examination of the artery; but it is not merely mechanical counting of the pulse rate. It is an art as well as a science. "Even as the strings of a lute illumine all the melody modes, the radial artery (hastagata-nāḍī) shows up all the diseases (in the body)" (Nāḍī-darpaṇa). To become proficient in pulse examination, incessant practice is important; but of importance is the trance-like concentration (samādhi) which the physician is capable of, while examining the patient; for it is only by such concentration that he can enter with "the aid of the lamp of wisdom" (jñāna-buddhi-pradīpana), the very insides of the patient (viśati āturyasya antarātmānam, *CS*, vimāna, 5, 12). The expertise is obtained by the grace of a competent teacher.

The examination as it was standardized in India involved the ascertainment of the size or volume of the pulse (determined by the condition of kapha), frequency or rapidity of the pulse (indicated by the condition of pitta), and the rhythm or regularity of the pulse (determined by the condition of vāta). The purpose is to know the prevalence of a particular dosha or a combination of two or all three doshas. The articulations of the pulse under the influence of such prevalence are likened to the creeping movement of a leech or a snake in vāta prevalence, to the leaping,

movement of a frog, crow or a sparrow in pitta prevalence, and to the steady movement of a swan, a peacock, or a pigeon in kapha prevalence (*SaS*, 1, 3,1). The movements may be characteristically isolated (when doshas are severally responsible for the disease), or may occur in combinations of two (like vāta-pitta, vāta-kapha and pitta-kapha) or of all three (saṁnipāta).

When the pulse emulates the movement of the snake, and then that of the frog, the indication is that both vāta and pitta have been vitiated. When, however, the articulations of the pulse resemble the movements of a snake as well as a peacock then vāta and kapha are vitiated. If the pulse is felt to jump like a frog alternately with the gait of a peacock, then pitta and kapha are vitiated. When all three doshas are vitiated (the condition known as saṁnipāta) this is indicated by the alternative slowness of the pulse (manda), intermittence (śithila), crookedness (vyākula) and fickleness (chañchala). The pulsation appears, disappears, and reappears frequently. At times it is very subtle, and hard to perceive; it varies time and again. The pulsation in this condition is likened to the unpredictable flutter, flight, and immobility of a partridge (tittirī) or a quail (lāvaka) (*SaS*, 1, 3 3), or to the movements of a rodent caught in a heap of fire-wood (loliṁba-rāja).

In order to apprehend the articulations of the pulse characteristic of the three doshas severally, the three fingers of the right hand of the physician are employed. If the patient is a male his right hand is examined and if a female, the left hand pulse is seen. The vata-dosha is examined by feeling the radial artery at the root of the thumb with the tip of the index-finger of the physician's right hand, the pitta-dosha with the tip of his middle finger, placed next to the foregoing position, and kapha-dosha with the tip of his ring-finger.

The examination of the pulse is done for the length of time the pulse takes to beat thirty times, or longer if required. Usually it

is repeated twice (that is, three counts are taken in all). But inbetween the counts, the physician withdraws completely his hand from the patient's wrist.

Both the patient and the physician must be comfortably seated while the pulse is being examined, and must be free from worry, fear, stress, and bodily urges. The patient's hand must be free, not too far not too near the physician, slightly flexed at forearm; the physician with his left-hand massages the hand of the patient slightly and holds it lightly; and then places gently the three fingers of his right hand (fore-finger, middle-finger and ring-finger) nearest the thumb, and the other two fingers next to it in order.

The best time for pulse-examination is said to be early in the morning. The articulations of the pulse characteristically differ during the course of the day, for in the early hours of the morning kapha prevails, around noon-time pitta, and in the evening vāta; and in the early part of the night kapha, around midnight pitta, and last part of the night vāta. Seasons also play an important role in altering the pulse-articulations. The pulse articulations also vary in accordance with the patient's bodily condition (hunger, thirst, sleep, exertion, food in the body, stage of digestion, posture, etc.), mental state (excitement, anger, sorrow, joy) and environment conditions (exposure to sun, heat, cold breeze, strong smells and so on). [See PULSE, PULSE-EXAMINATION, EIGHT-FOLD EXAMINATION, and Excerpts in the Appendices of this volume].

Nasya-karma: Included in the pañcha-karma group of treatments [See PAÑCHA-KARMA], 'nasya-karma' refers to errhine therapy, or treatment by nasal insufflation. The nose is the doorway to the head (nāsā hi śirasō dvāram), and for ameliorating or eliminating the vitiated doshas that have found their lodgement in the head, the nasal passage is utilized. The diseases of organs above the

clavicles (parts above the neck, like the head, eyes, ears, nose, teeth) are sought to be treated by introducing drugs through the nostrils. It is an old practice in India that eyesight was improved by regular nasal douching in cold water early in the morning; and many ailments of the head were cured by introducing drops of oil into the nostrils.

In particular, inflammation of the nasal sinuses, diseases of the back of the throat and ears, sleeplessness and even insanity are treated by this method. Also called, 'śiro-virechana' (purging of the doshas settled in the head), it consists mainly in the introduction of medicated substances (oils, or powders) into the nose. Medicine here is used in several forms: oils, animal fat (sneha), powders, dry (chūrṇa), pastes (kalka), decoction (kvātha), medicated spirituous liquids (āsava), and so on. Among the drugs generally used are *Zingiber officinalis* (śuṇṭhi), *Piper longum* (pippalī), *Piper nigrum* (maricha), *Acorus calamus* (vacha), *Ferula foetida* (hiṅgu), *Embelia* (viḍaṅga) and others. Prior to this treatment, it is important that complete or partial (head region) oleation and sudation treatments have been gone through [See SNEHANA, SVEDANA]; and oil applied to the head must be massaged with the warm palm (CS, siddhi, 1, 50).

Broadly, there are three types of this treatment: The first is 'virechana-nasya' (re-chana, karshaṇa or śiro-virechana), where fresh juices of drugs (like garlic, watery extract of śuṇṭhi or *Zingiber officinalis*), mixed with salt and honey, or drug-extracts in liquid form are introduced into the nostrils (avapida), or dry powdered drugs are blown into the nostrils by means of a tube (nasal insufflation, pradha-mana or dhumāpana). The latter form is the more intense of the two as it can absorb a much larger quantity of the vitiated dosha.

This type of errhine treatment is beneficial in cases of headache, conjunctivitis, diseases of the throat, swelling of the face, glandular

enlargement, worms, leprosy, epilepsy, a nasal affliction called pīnasa, heaviness of the body, stiffness of limbs, insomnia, and fever caused by the vitiation of all three doshas at once (saṁnipāta, CS, sūtra, 2, 1 and SaS, II, 8, 2). This is regarded as purificatory or eliminatory in effect (sodhana)

The second type of treatment is Brmhana-nasya (also called tarpana, snehana). Where nourishing or cooling substances (extracts or exudations of some trees, meat-juice of wild animals and birds and so on) are introduced into the nostrils. This type of treatment is indicated in pain due to vitiation of vāta, loss of voice or speech, parched throat or nose, paralysis of the arms, difficulty in opening the eyes, facial paralysis, tremor of the head, and weakness of the body-constituents.

This type has a further two-fold division, depending upon the dosage of the nutrient and oily substances introduced in to the nostrils: (a) 'marsha', which is a large dose (maximum dosage being 32 drops, and the minimum being 16) and (b) 'prati-marsha', which consists only of two drops in a dose, and which is prophylactic in effect; it could be administered even to healthy people, old or young, any number of times, at noon or night after food, when one gets up in the morning, after exercise and fatigue, and after day-sleep; it is especially suited for the aged and those who have suffered injury. And people who have a happy disposition profit more by it. But it is to be avoided in the case of children, in the case of those who have consumed liquor or in the case of chronic sinusitis (AHR, sūtra, 20, 26-27).

The third method of nāsyā-karma is śamana, (also called stambhana) where just milk or water (medicated or otherwise) is introduced into the nostrils, in the morning in diseases caused by kapha, at noon in diseases caused by pitta and in the evening in diseases caused by vāta. Its action is sedative or alleviating; it alleviates or eliminates the vit-

iated doshas, and thus normalizes the dosha involvement.

In case of haemorrhagic diseases, this is combined with 'prati-marsha'.

Errhine treatment is successful when the patient feels light in the body, light in the head, clear in the channels of circulation (srotas), when he is able to have normal and good sleep, when the disease is ameliorated. If the treatment is improper or inadequate, then the vitiation of vāta will be found, and sense-organs become rough. If the treatment is excessive, there will be a feeling of heaviness in the head, and confusion in sense-functions.

If, due to the treatment, vitiated kapha that was in the head gets dissolved and accumulates in the head, nose and throat, inhalation of fumes from drugs or medicated smoke (dhūmapāna) must be resorted to as a post-treatment procedure (paśchāt-karma). This will clear the congestion of kapha.

While the treatment is especially beneficial in coryza, torticollis, headache, facial paralysis and lockjaw, it is contraindicated in indigestion, early phase of nasal catarrh, fever of recent origin. It must not be resorted to when one is tired, when he has taken a purgative, when alcohol has been consumed; or immediately after food; while some poison is in the body, while fasting, or after enemata; nor is it beneficial when one is angry or sad. It should not be administered on a cloudy or rainy day. Usually it is not given for children under seven years of age or for old folk above eighty years.

Natural diseases: Diseases that are occasioned in the normal course of events by the natural processes of living are described as 'svabhāva-bala-pravṛtta' (SS, sūtra, 24, 7). Changes that occur owing to the forces of nature (prakṛti-śakti-jāta, NiS) are attributed to causes of distress like hunger, thirst, sleep; old age, death; and diseases that are incidental to the foregoing (prakṛtayah,

prakṛti-bhāva rogah, NiS, on SS, sūtra, 1, 24). Excepting death, the other diseases in this category may also be said to be caused by the doshas like for instance, thirst and old age by pitta, sleep by kapha and tamas, and diseases incidental to them by one or more of the doshas. When they are caused by the doshas primarily, they are amenable to remedy (pratikāra). (NiS on the above).

Thus, there is a two-fold classification of these natural diseases: (1) timely (kālakṛta), or due to the processes of aging or passage of time; and (2) untimely (akālakṛta), which are due to changes which are premature or unnatural. The former occur even when all care is taken to preserve and promote health (pari-rakṣhaṇa) inevitably, samaye praptā, NiS) while the latter are natural consequences of unhealthy living (apari-rakṣhaṇa) like improper food and conduct. They are classed under 'ādhidaivika' diseases, or diseases caused by forces beyond human knowledge and control (SS, sūtra, 24, 7). The NiS, however, mentions that there is a different opinion, according to which hunger and thirst are classed under the ādhyātmika or constitutional category (op.cit.).

When the diseases occur prematurely, albeit naturally, they may be remedied; even death which is untimely, may be prevented (pratikāryah). Especially so, when the disturbances of the doshas are primarily involved. But timely and natural occurrences can never be prevented or remedied (nishpratikāra, NiS on SS, sūtra, 1, 23). [See DISEASE].

Nidāna: The word is derived from *dā* (dyati, to bind on, to fasten) and is used in the sense of cause or motive. The earliest use of the word was for rope, band, halter, (for example, *RgVeda*, 8, 61, 5, *nidātri*: one who fastens or ties; 6, 32, 6, *nidāna*: band, rope; 5, 2, 7, *nidita*: bound, fettered; 8, 92, 11, *nidita*: concealed or hidden). In its extended meaning, it signified first or primary cause

(*RgVeda*, 10, 114, 2; also in the *Mahābhārata*). In due course, it came to suggest any predisposing condition, as in *Divyavadāna* where twelve nidānas are mentioned as constituting the phenomenal world of transaction and experience.

The medical context, however, specified the meaning as pathology or investigation into the causes of diseases, as indicated by the sections dealing with pathology in the *CS* and the *SS* bearing the name 'nidāna-sthāna'. The manual of MĀDHAVA-KARA, which has come down to us as *Mādhava-nidāna*, although its original name was *Rug-viniśchaya*. The expression nidāna here is a synonym of roga-viniśchaya which is ascertainment of diseases. But the word has acquired three connotations: ascertainment of disease (roga-nirnaya) (*Viśva*); the investigation pertaining to the ascertainment of disease (roga-nirnaya-sādhana); and the root-cause of disease (roga-hetu, *Rāja-nirghaṇṭa*).

The prefix *ni* has the sense of certainty or ascertainment (*niśchaya*), after VARARUCHI'S aphorism, 'ni-niśchaya-nishedhayoh' in the *Upasarga-s utra*. The terminal form is either instrumental (*karaṇe lyuṭ*), as *MK* has taken, or modal (*bhāve lyuṭ*) as GAṆA-NĀTH SEN prefers to take. VIJAYA-RAKSHITA in *MK* follows the first line of interpretation, and defines nidāna as the means of ascertainment of diseases (*nidānam iti karaṇe lyuṭ, tena vyādhi-niśchaya-karaṇam nidānam iti nidāna-pañchaka-sāmānya lakṣaṇam*). In this view the term applies equally to all five aspects of the diagnostic investigation (*nidāna, pūrva-rūpa, rūpa, upaśaya* and *saṃprāpti*); and nidāna as the first of these five aspects specifically means 'cause' which brings about premonitory symptoms and signs. If disease is the object of knowledge, then nidāna (in its general sense) is the means of this knowledge (*vyāder vijñātavyasya pañcha jñānopāyā bhavanti, MK*).

GANANĀTH SEN, however, argues that the word does not refer to diagnostic instruments or

investigation into disease, for it is well-known that the *CS* mentions the methods of investigation of diseases as three-fold *pramāṇa* (observation, inference and testimony), and thus the *SS* mentions the same as six-fold *pramāṇa* (the employment of five sensory functions and interrogation). These are recognized to be of instrumental value in the understanding of the cause and nature of diseases (*rogāṇām vijñānopāyāḥ*). But nidāna and the other four are actually objects of knowledge, and not instruments thereof (*bhāve lyuṭ, na karaṇe, na hi nidānādayo jñāna-karaṇāni, kimtu jñāna-vishayāḥ, nidānādibhir eva hi supari jñātair vijñātoyam roga iti vyapadeśāt, SIDDHĀNTA-NIDĀNAM, Part I, 4, p.38*).

The word nidāna in its practical aspects comprehends both diagnosis (the Greek word meaning, discernment or determination of the nature of the diseased condition through investigation into its symptoms and history) and aetiology (from the Latin *aetiology*, meaning, the assignment of a cause).

The diagnostic aspect is five-fold *nidana* (*nidāna-pañchaka*): (1) the primary cause, *nidāna*, (2) the premonitory symptoms, *pūrva-rūpa*, (3) clearly manifested symptoms, *rūpa*; (called *līṅga* in *CS*, *nidāna*, 1, 6), (4) homologation, *upaśaya* and (5) pathogenesis, *saṃprāpti*. [See DIAGNOSIS]. The aspect of aetiology is stressed in the *nidāna* as the first of the above five.

The difference between the two aspects is stressed when it is pointed out that *nidāna* as diagnosis tells us of the secondary diseases (*upadrava*), the prognostic details (especially of the impending death, *arishṭa* defined as *niyata-maraṇa-khyāpakam līṅgam*, which means the signs predicting certain death), the specific causative factors (*nidāna*, defined as 'rogotpādako hetuh', which include the five-fold *nidāna* mentioned above). It is definite determination of the origin, nature, course and effect of the particular disease. On the

other hand, nidāna as aetiology concerns only the causative details. (Also cf. *MK*, on *MN*, 1, 2).

Thus nidāna as aetiology is but a specific aspect of nidāna as diagnosis (nidāna-śabdoyam nidāna-viseshe jātau cha vartate, *MK*). In this sense, the definition provided by BHATTĀRA-HARICHANDRA becomes relevant: "nidāna" is that which reconstructs the disease, which is well connected by causes etc" (ni-dīyate nibaddhyate hetvādi-sambaddho vyādhir anena, c. in *MK* on *MN*, 1, 4). Such reconstruction is meant to 'formulate' the nature of the disease so that appropriate treatment may be decided upon (cf. the view of JEJATA, niśchitya dīyate pratipadyate vyādhir anena iti nidānam, c. in *MK*).

Although the *CS* uses the expression nidāna in the general sense of 'cause' (cf. nidāna, 1, 3), and synonymous term hetu in the sense of aetiology (cf. sūtra, 1, 24, hetu-liṅga-aushadha-jñānam),²⁴ it is found that the work also means by it the instrument of knowledge or the source of understanding (ibid., vimāna, 8, hetur nāma upalabdhi-kāraṇam), and explains that it is observation (pratyaksha), inference (anumāna), traditional wisdom (aitihya) and analogy (aupamya, ibid.). The *CS* expressly calls these methods as hetu (ebhir hetubhih). The commentator, thus, is forced to point out that nidāna means that which produces diseases (vyādhī-janakam nidānam hetuh) and that which provides the knowledge of the diseases (vyādhī-bodhakam cha).

Interestingly, however, the commentator does not mean by the latter the instruments of knowledge (observation, and so on), as the *CS* would justify, but the five-fold diagnostic dimensions: nidāna, pūrva-rūpa and so on. (CHKP. on *CS*, nidāna, 1, 3). Elsewhere also, the commentator mentions that 'nidāna, strictly means the actual and effective cause of disease (nidāna-śabdo janana-kāraṇa-vachana eva, ibid., 1, 1). [See also AETIOLOGY (NIDĀNA)].

O

Observation: One of the three major methods of clinical examination (parīkshā, the other two being inference and valid testimony), observation (pratyaksha) is of primary importance in the diagnosis of a disease, and also in the ascertainment of the nature and curability of the disease. Indian medicine generally follows the Nyāya ideology regarding the means of valid knowledge (called pramāṇa), naturally introducing a clinical orientation.

The *CS* (vimāna, 4,4; and 8,39) defines observation as direct apprehension of objects through the instrumentality of the sense-organs, or through the mind. External objects (sound and form) are recognized by the sense-organs, while internal experiences (like happiness, unhappiness, desire and hate) are apprehended by the mind. Mind, however, is necessarily involved in the functions of the sense organs (*CS*, sūtra, 8,4, chesṭā-pratyaya-bhūtam indriyāṇām), but mental apprehensions are so-called because of the absence in them of sensory functions. The distinct role of the mind (manas) in observation is recognized: (1) by the difference that obtains between the perception of physical objects and the perception of feelings and moods; (2) by the activity of the sense-organs being characteristically founded upon attention which is a mode of the mind (indriyādhishthāyakatva-viseshāt); and (3) by the subtle objects which are amenable only to the mind, and not to the sense-organs (indriyebhyah sūkshmataram durava-

bodhatvat)²⁵

DALHAṆA (on SS, sūtra, 1,16) defines observation as whatever knowledge that is immediate and objective (arthasya sakshāt-kāri-jñānam) and cites a passage: "The object becomes a matter of observation (the word pratyaksha being used here in the sense of an observed object) when it has entered the mind and the sense-organs, and when it is not caused by delusion."²⁶

The CS (sutra, 11,20) spells out that observation proceeds by an organized operation (saṁnikrsha) of the individualized self, the sense-organ, the mind, and the external object. The description follows the Vaiśeṣhika position which emphasizes the organized or conjoint operation of the four details (chatusṭāya-saṁnikarsha), which further does not disagree with the things as they are (avitathā), and which is independent of verbal designations (avyapadeśya). A percept is characteristically different from a concept (which is inseparable from the word associated with it).²⁷ It is interesting to note that the earlier Vaiśeṣhika position ignored the role of mind (Vaiśeṣhika-sutra, 3,1,18).²⁸ Mind was said to be involved only in inner perceptions like pleasure or pain (ibid. 5,2,15).²⁹

The Nyāya system not only involves mind as a necessary and specific adjunct of the sensory functions, but emphasizes the general and wholesome role of mind, inasmuch as observation to be valid must further be independent of the artifices of verbal designation (avyapadeśya), free from fluctuations (avyabhichāri, which is the same as the Buddhist 'abhrānta', 'unerring'), and carrying conviction (vyavasāyātmaka, that is, free from doubt, Nyāya-sūtra, 1,1,4).

Thus, the definition offered by CS (sūtra, 11,20) brings out the relational, objective, and immediate nature of perception. "It comes into being as a result of the organized operation of the individual self, the sense-organ, the mind, and the external object;

it is definite in its manifestation (vyakta, the Commentator, explains that this rules out fluctuations, false cognitions, and doubts), it is immediate (tādātve, thus ruling out inferential reasoning and the play of memory), and it is a mental act of apprehension (buddhi)".³⁰

The CS (sūtra, 11,8) follows Sāṁkhya-kārikā (7) while enumerating conditions in which observation is impeded or vitiated: when the object is too close to the sense-organ, when it is far removed, when it is masked or covered, when the sense-organ is under a temporary disability (as vision in jaundice), when attention is absent, when the object is mixed up in a cluster of other objects of the same or similar nature, when some overpowering influence is present (as in the case of a meteor at noon), or when the object is too minute to be noticed.³¹

The clinical application of observation figures prominently in the CS (vimāna, 4,7; chikitsā, 25,22) and the SS (sūtra, 10,5). One who would understand the facts concerning the disease of a patient (rogatattva) must proceed to examine all the details in the patient's body that may be sensorily apprehended through all of his own sense-organs, barring the sense of taste. Whatever, for instance, are the audible things in the patient's body (like the gurgling noises in the intestine, cracking sounds of the joints of bones as also in the finger-joints, the peculiarities of the voice of the patient, and so on) must be examined by the physician by making use of his own ears. Whatever could be discerned visually (like the colour of the patient's skin, the shape of his body, the relative proportions of the limbs, emaciation, physical strength and the normal and abnormal conditions of the body), must be examined by the physician using his own eyes. Likewise, examination by the nose will reveal normal and abnormal

odours of the patient's body (smell of the wounds, phlegm, blood, urine, faeces, monthly discharge of women, and so on). Examination by the feel and pressure of the physician's hand will reveal whatever can be apprehended by touch (cold, heat, coarseness, softness, hardness, oiliness, fever and swelling).

Taste is an exception. Tastes of various factors in the body (urine, phlegm, faeces, blood, nasal discharge), are important indications in diagnosis, but the physician is advised to ascertain them, wherever possible, by inference, and not by direct observation. Taste in the mouth of the patient must be ascertained by questioning the patient [See EXAMINATION OF TASTE].

Oleation therapy: [See SNEHANA].

Omens: [See ŚAKUNA].

P

Pacification: [See ŚAMSĀMANA].

Pain: Different kinds of pain (vedanā, literal meaning, sensation, knowledge, suffering), especially with regard to ulcers and wounds (vraṇa) have been described and classified in terms of the four-fold sources (vāta, pitta and kapha and saṁnipāta, SS, sūtra, 22, 11).

(1) The pain that is due to vāta disorders may be a pricking pain (todana, 'as if by a needle, NiS), piercing (bhedana, as if the skin is cut), thrashing (tāḍana, as if by sticks), cutting (chhedana, as if cut into two by a sharp instrument), expanding (āyāmana, as if a part of the body is being stretched out),

gnawing (manthana, as if the inside of the wound is churned by a churning-stick), shooting (vikshepana, as if it is being sent out), tingling (chumu-chumāyana, as if smeared by the mustard paste), burning (nir-dahana, as if completely burnt by a fire), breaking (avabhañjana, as if being reduced to powder), bursting (sphoṭana, as if by stone), pinching (vidārana, as if torn by nail), uprooting (utpaṭana, as if being pulled up), quivering (kaṁpana, as if shaking), aching of various kinds (vividha-sula-visleshana, as if smitten on the body with different types of sharp weapons), shifting (vik-irāṇam, as if pain spreads or moves to different parts of the body), stuffed (puraṇa, being filled), benumbing (stambhana, as if rendering inert), indurating (svapna, as if bringing about sleep), contracting (ākunchana, as if making the limb crooked) or spasmodic in character (aṅku-sika, as if pinning a goad and drawing it out).

If the pain appears and disappears without apparent cause (animitta), or if the pain is varied (vividha) and shifting (muhur-muhur-yatrā-gacchanti), then it may be ascribed to vāta disorders.

(2) Pain due to pitta disorders may assume the following forms: A sensation of being sucked in at a part of the body (osha, ekadesika, NiS) or in the entire body (chosha), burning sensations all over the body (pari-dāha), feeling as if the body is giving out hot fumes (dhūmāyana), feeling as if pieces of live coal are dropped on different parts of the body (gātram aṅgārāvākīrṇam iva); sensations of bodily heat mounting (ushmābhivṛddhi), and sensations of saline water being poured over open wounds (kshate kshārā-vasiktavat).

Pain due to disorders of blood assume forms similar to the above.

(3) Pain due to kapha disorders manifests itself as itching (kaṇḍū), heaviness (gurutva), benumbed feeling (suptatva, non-perception of mosquito bites or scratches by nail etc.),

sensation of something plastered over (upadeha, lipatva), slight pain (alpa-vedanatva), rigidity (stambha) and coldness (śaitya).

(4) Pain due to the disorders of all three doshas (saṁnipātika) is known by the simultaneous appearance of the symptoms mentioned above under each head (śarvāsām vedanānām utpattih, SS, op.cit.)

Paiśācha-sattva: A personality type of the patient, characterized by traits distinguishing the malignant goblin of folk imagination, called *piśācha* (flesh-eating and impish ogre). These traits are absence of cleanliness, delight in dirt, terrifying aspect, timidity and confusion, fondness for pervert pleasures and obnoxious food, love of women, indolence, cruelty and fear, suspicious nature, gluttony, intensity of anger, and lack of shame. This type belongs to the rājasic group of people who are generally violent in temper, and prone to many ailments. [See PERSONALITY OF THE PATIENT].

Pañcha-karma: Pañcha-karma (literal meaning, five-fold therapeutic action) is a collective expression for the cleansing of the physical constitution (saṁśodhana or purification), which is one of two major methods of internal medicine (antah-pari-mārjana), the other being curative treatment (saṁśamana) [See INTERNAL MEDICINE; THREE-FOLD METHODS OF TREATMENT and SAṁŚODHANA].

Karma in this context signifies specific action directed towards therapy; and therapy here is directed towards the elimination of the vitiated doshas for the purpose of cleansing the constitution, and therefore all the therapeutic actions listed under this head are properly cleansing devices (or sodhana). They are also eliminative processes, (viz. eliminating the vitiated doshas) and are therefore generally called the laṅghana treatments. The exception is the anuvāsana-vasti (or sneha-vasti), which will be dealt with later. [See SAṁŚODHANA, LAṅGHANA, also UPAK-

RAMA].

These treatments are resorted to when the normal pacification (or palliative) treatment (śamana) fails to correct the disturbed doshas. Their main purpose is to eliminate the vitiated doshas from the body, and thus cure the diseases. While they are curative in their import, they may also be employed as preventive and promotive measures, for they are also prophylactic. Normal health is the resultant of these treatments, and a resistance against the factors that are likely to upset the balance of the doshas is built up; longevity is a side-benefit. Body metabolism is rendered efficient, and digestion normalized. Sense-functions become alert, body strength is enhanced, and mind becomes clear and sharp. The degenerative processes in the body are effectively stalled or slowed down (CS, sūtra, 16, 17-19).

This line of treatment has five major procedures (pradhāna-karma): (1) emesis (vamana); (2) purgation (virechana); (3) evacuation by enema (nirūhana); (4) unctuous enema (anuvāsana-vasti); and (5) errhine therapy or nasal insufflation (nasya). This is also the order in which the treatment is carried out. But before emesis, it is advisable to administer to the patient two pre-operative treatments (pūrva-karma): oleation [See SNEHANA] and sudation [See SVEDANA] (*Chikitsā-kalikā*, cited in *Sarvāṅga-Sundara* on *AHr*, sūtra, 16,1).

If this is the list of five therapeutic operations according to the CS, there is a slightly different list in the SS. The two enemas unctuous or 'anuvāsana-vasti' (in SS it is called sneha-vasti) and the use of decoctions as enemata or 'nirūha-vasti', are in the SS listed under one head, and blood-letting (raktamokshana) has been named the fifth (SS, chikitsā, 36,17). [See BLOOD-LETTING]. This is based on the idea that blood is the fourth *dosha* (with vāta, pitta and kapha, the classical three), and that a large number of diseases are caused by its vitiation (SS, sūtra,

21,3). The idea, however, is rejected by CHKP on CS, sūtra, 1,57 (traya eva doshāh).

The five therapeutic operations (counting the two enemata separately) are regarded as principal procedures (pradhāna) with reference to the two auxiliary or preparatory operations (pūrva-karma) that precede them, oleation (snehana) and sudation (svedana). These two pre-operations are helpful in loosening the vitiated doshas which are stuck in the body tissues, releasing them for circulation and showing them up in the alimentary canal, so that they may be thrown out by the principal operations (CS, sūtra, 2,15).

Snehana and Svedana are followed thus: the preparations containing fat (oils, ghee, animal fat and bone-marrow) are administered internally and externally (food, massage, inhalation, enema and so on) and render the body soft, disintegrates the accumulated and stagnant doshas, and clears the accumulated and obstructing (to the channels of circulation) waste-products of metabolism like mala, faeces, urine, and so on. This is known as snehana (oleation or lubrication), [See SNEHANA]. After this, the application of fomentations is done. These may be unctuous, for example with ghee, oils, vapour bath; or dry, with heated sand, hot bricks, husks of cereals, sun-bath. Forms of sweating without the employment of heat (niragni) that is by exercise, warm clothing, hunger, poultice, bring out sweat which is an internal secreta of the body, and this liquifies or melts the doshas held in the subtle channels of the body (CS, siddhi, 1, 7) and also the waste-products of metabolism (mala, which would have been disintegrated by snehana), [See SVEDANA]. These two preparations (first snehana and then svedana help bring the chief of the doshas, vāta, under control, so that in the course of the principal operations (śodhana) the entirety of the vitiated doshas can be thrown out.

Although, normally no pañcha-karma

treatment is begun without these two preliminary operations, they are skipped in some cases, as when the vitiated kapha is excessive and is lodged in the stomach (āmāśaya); emesis is then directly resorted to.

(1) Emesis (vamana) is the first of the pañcha-karma series and consists in causing vomiting of the vitiated doshas (especially kapha from the upper regions of the body (dosha-haranam ūrdhav-bhāgam), by means of suitable drugs (which should be repulsive, nauseating, indigestible and tending to move upwards). When properly administered, the vomit will take this course: first salivation, then the medicines taken, followed by kapha, pitta and vāta in that order (SS, chikitsā, 33, 22; CS, siddhi, 1,15): channels of circulation are cleared, sense-functions become effective, lightness in body and heart and clarity of mind are ensured. The emetic treatment is especially indicated in diseases where the vitiation of kapha figures prominently. [See VAMANA-KARMA].

(2) Purgation (virechana) comes second in the series, and consists in the administration of purgatives (drugs which are pleasant, palatable, easily digestible, and tending to move downward) in order to eliminate the vitiated doshas (especially pitta) from the lower regions of the body (adho-bhāgam virechana-samjñakam, which translates as, taken from the stomach to the large intestines and expelled through the anal passage). When properly carried out, the expelled contents will be in this order: faeces, urine, pitta, medicines taken and kapha (mucous, SS, chikitsā, 33,22). Clarity of mind, efficiency of the sense-organs, stability of the bodily constituents, vigour and good digestion are brought about by proper purgation (SS, ibid,26). The treatment through purgatives is especially indicated in diseases where the vitiation of pitta along with the vitiation of kapha figures prominently. [See VIRECHANA-KARMA].

(3) Enemata with unctuous substance (sneha-vasti or anuvāsana-vasti) is the administration of unctuous drugs (in oils, ghee, animal fat) into the bladder through enema, in order to eliminate the vitiation of vāta, which is the chief among the doshas (vastir vāta-haranam, CS, sūtra, 35). This is regarded as an extremely beneficent treatment, good for old and young alike, for the fat and the lean alike; it helps rejuvenation, secures good health and prolongs life. [See VASTI-KARMA].

A variety of this unctuous enemata is known as 'mātrā-vasti', which is harmless and involves no restriction of diet, behaviour, time of the day or season of the year. It is suitable even for daily use by those who are emaciated, debilitated and overworked. It helps easy and complete elimination of the waste-products of body metabolism.

(4) Enemata with decoctions of drugs (kvātha), milk, juice (nirūha-vasti or āsthāma-vasti) is also meant to eliminate the vitiated vāta. This is especially indicated in nervous diseases and diseases of the gastro-intestinal tract. Many varieties of this are recognized like 'utkleśana', which removes the vitiated dosha from its location, 'dosha-hara', which actually expels the dosha thus removed from its location, and 'śamana' which cools, soothes or ameliorates the dosha after the vitiation is removed from it, 'lekhana' a mild variety of nirūha-vasti, 'brmhana' nutritive in effect and 'picchila' emollient in irritations of the colon. [See VASTI-KARMA].

(5) Errhine therapy or nasal insufflation (nasya) is described as a purgative to the head (śiro-virechana). It consists in introducing into the nostrils suitable medicines in liquid form (oils, taila) or powder-form (chūrṇa) in order to throw out the vitiated doshas from the parts of the body above the clavicle (neck, throat, head, nose, teeth). The treatment is administered through the

nose, because the nose is the gateway to the head ('nāsā hi śirasas dvāram'). Three varieties of this therapy are recognized: purgative or eliminatory (rechana), nourishing or cooling (tarpana), and sedative or alleviating (śamana). [See NASYA-KARMA].

Pañchendriya-Parikshā: [See EXAMINATION BY THE SENSE-ORGANS].

Pathogenesis: Known in Sanskrit as 'saṁprāpti', the expression describes the manner in which the specific disease makes its appearance. It is the fifth and final stage of the diagnostic process, coming after the primary cause of the disease (nidāna or hetu), premonitory symptoms (pūrva-rūpa), manifest symptoms and signs (rūpa), and exploratory or amelioratory therapy (upāśaya) [See NIDĀNA, DIAGNOSIS]. It signifies the final appearance of the disease with all its characteristic symptoms and signs and also the physician's arrival at the diagnostic definition of the nature of the disease in terms of the dosha disturbances.

Pathogenesis as a diagnostic tool considers several aspects of the disease like the enumeration of the disease in a broad manner (saṁkhyā), determination of the relative importance of the doshas that are disturbed (prādhānya), partial or fragmented involvement of the doshas concerned (vikalpa), the strength or otherwise of the disease (balābala), and the time that facilitates the aggravation of the disease (vyādhi-balakāla). [See SAṂPRĀPTI].

Pāśava-Sattva: A personality type of the patient, characterized by traits distinguishing the dull, dumb beasts of burden (paśu). The traits are forbidding disposition, despicable conduct, disgusting food-habits, sexual indulgence, gluttony, and constant indolence, absence of cleanliness, slowness in thought and action, and a negative approach. This type belongs to the tāmasic group of

people who are generally dull, apathetic, ignorant, dejected and confused. [See PERSONALITY OF THE PATIENT].

Personality of the patient: An important consideration for diagnosis is the patient's constitutional disposition or personality type, which is described in terms of one of sixteen *sattvas*.

The expression '*sattva*' has several shades of meaning in Indian thought. The earliest use of the term is in the Sāṃkhyan context of nature (*prakṛti*) being three-fold in constitution: *Sattvic*, *rajasic* and *tamasic* [See SĀM-KHYA, GUṆA, SATTVA, in Volume two]. It later acquired the meaning of mind (*manas* as in CS, sūtra, 1,42, Śarīrendriya-sattvā-tma-saṃyogo dhāri jīvitam; also *ibid.*, 46,55, *sattvasaṃjñe manasi*), or manifestation of mind (*mano-vikāsa*, as in *sattvam manovikāse syāt tadayathā sthitiḥ*, RN, 21). By an extension of this, other meanings like, being (any living being, sentient, *cf.* SS, *chikitsā*, 9,69, in the sense of a parasite), strength (*bala*), nature or natural property (*svabhāva*), life (*āyus*), essence (*rasa*, as in expressed juice, *svarasa*) have come into vogue.

But the CS, SS and KS employ the expression *sattva* also with a technical connotation, signifying the stuff of which the man is made; natural character; or inborn disposition; dominated by mind (namely, psychological factors). The context of the employment of the word in this sense is the classification of persons (patients as also others) into different personality-types so that their proneness to certain illnesses may be ascertained and the proper therapy prescribed (KS, sūtra, 'Lakṣhaṇādhyāya', 28: *sattvānām sattva-vijñānam hitam aushadha-kalpāne*). The classification takes into account the person's body-build, habits, natural and acquired traits, temperament, attitudes and orientations, urges and inclinations, capacities and weaknesses, likes and dislikes, emotions and

intelligence, and so on.

The fundamental classification is in terms of the three bodily *doshas* which are responsible in their normalcy for health, and in their disturbance the three constitutional types: *vātika*, *paittika*, *ślaishmaka*. There is also an involvement of the two *guṇas* acting as *doshas* which are purely psychological: *rajas* and *tamas* (mind being *sattva*) [See GUṆA, SĀM-KHYA]. Thus, disease is caused by the vitiation of these bodily and mental *doshas*. It must, however, be remembered that the three *doshas* and the three *guṇas* have correspondences (CS, *sārīra*, 4,34).³²

Mental disposition (*sattva*) is basically three-fold: pure (*śuddha*), violent (*rājasa*), and dull, (*tāmasa*), depending on the prevalence of each of the three *guṇas*. The first is largely free from defects (specially abnormalities with respect to speech, thought and bodily behaviour), while the other two are defective or abnormal. The distinction is between the disease-free (the first type) and the disease-prone types (the other two types). Among the disease prone types, one is dominated by excessive activity prompted by anger, and other emotions, while the other is dominated by inactivity due to delusions and confusion. Each of these has varieties depending upon physical characteristics and psychological tendencies. It is recognized that the mind and the body are interdependent, and that there is an impact of the mind on the body and of the body on the mind (CS, *ibid.*, 35, *śarīram hy api sattvam anuvīdhīyate sattvam cha śarīram*). There is also a hierarchical notion in describing the pure type as the best (*śreshtha*), the violent type as middling (*madhya*) and the dull type as the worst (*adhama*) (KS, *ibid.*, *trividham sattvam uddishtam kalyāna-krodha-mohajam: śreshtha-madhyā-dhamatvam cha teshām proktam yathākramam*).

The pure type has seven varieties according to the CS and the SS, and eight according to KS. The violent type has six varieties

according to the *SS*, and seven according to the *CS* and *KS*. The dull type has three varieties according to all three authorities. But it is recognized that these are only broad categories and are not exhaustive. There may be other varieties. The names given to these varieties reflect the old idea that the pure type is illustrated by gods, demigods, sages, and the best among human beings; and that the violent type is illustrated by lowly animals and plants. The *SS* names the varieties as *kāya* (constitution) while the *CS* and the *KS* call them *sattva* (*suddha-sattva*).

1. The pure type (*suddha-sattva*) is characterized by gentleness, readiness to share with others their pleasures, power of endurance, benevolent truthfulness, piety, belief in religious matters (like virtue, god, other planes of existence), and conduct appropriate to this belief; knowledge; presence of mind; brilliance of mind; memory, fortitude and selfless conduct.³³

(1) The *Brāhma*-variety: the purest among the pure and therefore called *Brāhma*, the persons belonging to this variety are distinguished by their purity (in body, mind and speech); truthfulness; self-control; discrimination; knowledge and wisdom; ability properly to communicate; power of repartee; memory; freedom from lust, anger, greed, arrogance, delusions, envy, depression and intolerance; the tendency to be the same with all beings; austerity; compassion; generosity and virtue; piety; hospitality; reverence for teachers; and inclination to the study of sacred texts (*SS*, *śārīra*, 4, 81).³⁴

(2) The *Ārsha*-variety: Persons belonging to this variety are so called because they resemble the sages (*rshis*) whom even the gods adore. They are devoted to sacrificial ritual, study of the spiritual lore, fulfilment of vows undertaken, chastity, and hospitality; are free from pride, ego, attachment, aversion, confusion, greed and anger; and are brilliant, eloquent, wise and endowed with retentive memory; pure in body, speech

and mind; compassionate; given to repetition of sacred formulae and study; celibacy; self-knowledge; and wisdom.³⁵

(3) The *Aindra*-variety: (Mahendra in *SS*, *ibid.*, 82). Persons belonging to this variety are so called because their conduct answers to the description of the mythical chieftain of the denizens of heaven, Indra (Mahendra). They are possessed of great power and their words are promptly obeyed; they are often engaged in religious activities; they are brave and strong, full of splendour; they refrain from mean conduct; they are far-sighted and are devoted to virtuous living, wealth and pleasures of life; they are learned and great; and they support good persons and worthy causes; they are always engaged in studying the scriptures and acting in accordance with them; they are valorous and commanding; and they protect their dependents (*SS*, *ibid.*).³⁶

(4) The *Yāmya*-variety: Persons belonging to this variety are so called because they resemble in their behaviour the demi-god called Yama, who presides over virtuous living, death and destiny. They have a sense of propriety in their actions and a tendency to do things in proper time; they are invincible and energetic; they have strong memory, lust, envy, and anger; they are prone to confusion; they are free from arrogance, fear and anger; they are disposed favourably alike towards friends and enemies; they are firm, active and pure in their thoughts and actions (*SS*, *ibid.*).³⁷

(5) The *Vārūna*-variety: Persons belonging to this variety are so called after Varuna, the patron-god of the oceans (the Water-divinity) for they are fond of water (*KS*), love to sport in water-stretches (*CS*), and feel better in cold weather (*SS*). They are generally clean and tidy; and they love purity, and dislike dirt; they are distinguished by valour, fortitude, love of rituals, and hatred of mean conduct; they become indignant or delighted as occasion demands; they think and act big,

engage themselves in virtuous conduct, and are quick to get angry and also to relent; they are patient, love cold things, have eyes with yellowish tinge and hair which is reddish brown; they are soft-spoken and endear themselves.³⁸

(6) The Kaubera-variety: Persons belonging to this variety are named after Kubera, the demi-god of wealth and the chieftain of the pleasure-loving celestial artistes, for they generally love wealth, are fond of pleasures, incline to live in comfort and luxury, and prefer to have a large progeny. They are usually surrounded by attendants, dependents, and associates; they love prestigious positions and honour; they engage themselves in virtuous conduct in amassing wealth and satisfying their desires, but they prefer purity of life; they are ready to reveal their pleasure and displeasure; they crave possession of lands, houses, engage servants, and are determined to be prosperous; their indignation or their benevolence will not be in vain; they are generally neutral in their attitude; they can endure hardship while amassing wealth or while protecting it; and are virile in progeny (SS, *ibid.*, 84).³⁹

(7) The Gandharva-variety: The gandharvas are celestial denizens who are celebrated in mythology for their skill in singing, playing musical instruments, and dancing. Persons belonging to this variety are so called because of their fondness for music and dance. They delight in singing, dancing, and playing on instruments, and they are proficient in musical discourses, recitation of poems, narration of episodes and anecdotes recounted in mythical legends and epics; they love anointing themselves with fragrant unguents, wearing fine dress, and consorting with women; they are not jealous by temperament; they are comely to look at, and are witty; they are fond of sporting.⁴⁰

(8) The Prājāpatya-variety: This is mentioned only in *KS*, and not in the *CS* or the *SS*. Prajāpati is the lord of all the created

things, and is first created by Brahmā. Therefore, *KS* enumerates this variety immediately after the Brāhma-variety. Persons belonging to this variety usually have large progeny, are energetic, virtuous, and are loved by the people; they are not envious, nor are they arrogant; they are wise and pure in their conduct.⁴¹

The above varieties are all alike distinguished by the abundance of virtuous or excellent qualities (*kalyāṇāmśa*) that make for a happy and beneficial life. The thoughts in the persons belonging to any of the above varieties are pure, unsullied by evil or violent intentions. The persons are generally healthy, tranquil, well-formed, learned, wise, noble, long-lived and happy (*KS, ibid.*).⁴²

II. The Violent type (*rājasika-sattva*) is characterized by different degrees of excessive activity, strong emotions, and harsh temperament. Being constantly active, they are generally tense, anxious and troubled. They move about much, and hence their thoughts are mostly unsettled. They are proud and arrogant, lustful and ambitious; they are given to uttering lies, and are cruel; they are uninhibited both in their pleasure and in their anger (SS, *śārīra*, 1,18). While *CS* and *SS* enumerate six varieties in this type, *KS* recognizes seven. (SS, *op.cit.*).⁴³

(1) The Āsura-variety: Persons belonging to this variety are so called because of the prevalence in them of evil inclinations, wicked thoughts, and fierce temper, all of which characterize the evil spirits (*asura*). The expression 'asura' actually means one who delights in sensual pleasures (*asu rata*), and is symbolic of the *rājas* temperament. Persons answering to the 'asura' description are brave, fierce, and envious; they tend to order people about, and may assume terrifying aspects; they are ruthless and conceited; they think ill even of good people, and are fond of deceit; they alternate between mercy and fear; they are quick to lose their temper, and hate to find good qualities in others; they

prefer to eat by themselves, and love to move about under cover.⁴⁴

(2) The Rākshasa-variety: The rākshasas (demons) are distinguished from asuras in that the former are always engaged in disturbing the sacrifices of sages, are gluttonous, destructive and impish. Persons belonging to this variety are intolerant, cruel, and constantly angry; they wait for unguarded moments, or look for weak points, and strike; they are gluttonous and relish meat for food; they are also indolent and they sleep much; they are full of envy; they are quarrelsome and revengeful; they are alien to virtuous living, dogmatic in their views and full of self-praise.⁴⁵

(3) The Piśācha-variety: The piśācha is a class of disembodied spirits who are malignant, terrible and impish, they are ogres, and are fond of eating flesh. Persons belonging to this variety are not only unclean but delight in dirt; they are terrifying in aspect, but are timid and perplexed by nature; they love perverted pleasures and obnoxious food; they love women and seek to enjoy them in secret; they are extremely indolent; they are cruel when not scared; they are suspicious; they are gluttonous and especially fond of meat and wine; they also relish left-overs; they are intense in their anger, and at times become adventurous; they are shameless.⁴⁶

(4) The Sārpa-variety: The sarpa is a dragon, known for its quick temper, unforgiving and spiteful nature and fatal bite. Persons belonging to this variety are constantly, quickly and intensely roused (to wrath), but are timid when not roused; they are quick to react and they strike hard; they love food and sport, but are terrifying while they eat food or while walking about; they spend much time in sleep, but are very active while awake; they are vengeful and their hatred is long-standing; they are full of deceit and trickery.⁴⁷

(5) The Praita-variety: The word preta literally means "one who is gone from here"

(pra+īta); it denotes generally a ghou, or a disembodied spirit, seizing and tormenting living beings. While the CS and the SS name this variety of people after 'preta', the KS names it after 'bhūta', which means a ghost or a goblin. Although the two (preta and bhūta) are distinguished in folk imagination, they are almost synonymous as far as the personality characteristics are concerned. People belonging to this variety are gluttonous, tortuous in their disposition and conduct, envious, indiscriminate and impulsive, excessively indulgent and inactive; they frequently experience dejection; they are miserly; they are conceited, hateful; they are deformed in limbs and face; and they love darkness (viz. night).⁴⁸

(6) The Śākuna-variety: The expression śakunī means a bird, especially vulture. As the name for a type of people, characterized broadly by rajas, it suggests the traits peculiar to this predatory bird. Persons belonging to this variety are passionately attached, are excessively fond of food and roaming about, unsettled (in place and, in thought), unforgiving and averse to gather and store (non-acquisitive); they are intolerant, fond of obnoxious food and vulgar speech; they are suspicious, timid, and full of wicked thoughts; they incline excessively to satisfy their own lust; and are constantly eating.⁴⁹

(7) The Yaksha-variety: This variety is given only in KS. The word 'yaksha' relates to a class of sylvan spirits who are capricious inhabitants of mountains and forests, fond of music, and pleasure-loving. Persons belonging to this variety are generous by nature, indolent in habits, fond of good food and drink, sexy and floppish, and always cheerful.⁵⁰

The above varieties are all distinguished by the abundance of intense emotions and excessive activity, inclining towards violence and aggression (roshāṁśa). The prevailing guṇa here is rajas, which tends to mix up the other two gunas: sattva and tamas. The per-

sons answering to this type are liable to numerous diseases.⁵¹

III. The dull type (*tāmasika-sattva*) is characterized by different degrees of inactivity, apathy, and ignorance. They are generally dejected; they do not believe in god nor have piety; they are averse to virtuous living; they are incapable of thinking and their knowledge is poor; they have wrong ideas and have no enthusiasm for any work; they are given to frequent and heavy sleep. There are three varieties in this type. (*SS*, op.cit. 18).⁵²

(1) The *Pāśava*-variety: The expression *paśu* refers to dumb animals or beasts of burden, which are guided solely by bodily urges and instincts. Persons belonging to this variety are forbidding in their disposition, despicable in their conduct, disgusting in their food habits, sexy and given to excessive sleep; they have little wit, and have no sense of cleanliness or refinement; they are slow in their thoughts as well as their actions; their preoccupation alternates between food and sex; and they are generally negative in their attitude.⁵³

(2) The *Matsya*-variety: *Matsya* means fish, which is regarded as lower in the level of life than the beasts of burden, for its physical and psychological traits are extremely limited. Persons belonging to this variety are timid, lacking in intelligence, interested always in food, altogether unsettled (in place or interest), passionately attached to desires and aversions, fond of water, and given to constant mobility; they are dull, gluttonous, uncontrollable in craving or in anger, cruel, self-centered, and deceitful; they are virile and they usually have a large progeny; they are foolish, and tend to quarrel among themselves.⁵⁴

(3) The *Vānaspatya*-variety: The expression *vanaspati* signifies a plant or tree, lower in the order of life than even the fish. Persons belonging to this variety are the least intelligent or active among all the varieties. They are indolent, interested only in food, bereft

of all intelligence and discrimination; they are simpletons, indifferent to cold, heat, wind, suffering and so on; and are content to remain where they are placed.⁵⁵

The above varieties are all distinguished by the abundance of confusion, resistance, ignorance, sloth, and inactivity (*mohāṁśa*) that make life dull and insignificant. Whatever is indecent, unvirtuous and non-beneficial is classed under this type.⁵⁶

The above three types with their varieties are enumerated in order to help in outlining the line of treatment that would be most beneficial to the patient on hand (*katham cha yathā-sattvam upachārah syād iti*, *CS*, op.cit., 40). Treatment varies according to the personality type of the patient, for the involvement of the three doshas in the aetiology of the disease has correspondence with the three *sattvas* (*śuddha*, *rājasa*, *tāmasa*).

Physical Examination: The employment of all the sense-organs (excepting tongue) is advocated to ascertain the prevailing physical condition of the patient involving (1) appearance, complexion, colour of the skin, emaciation or otherwise of body, the relative proportions of the limbs, general shape of the body, normal or abnormal conditions of the body, and the visible symptoms of a disease; (2) gurgling sounds in the intestine, cracking sound in the bone-joints and finger-joints, changes in the voice of the patient and his articulation, and any other sounds in the body; (3) normal or abnormal odours in the entire body, especially the festering smell of wounds, foetid smells of urine, faeces, menstrual discharge, pus, etc., and (4) the condition of the skin and of the general body surface like being cold to touch, warm, coarse, soft, hard, etc., and the conditions of the body like fever and swelling (*CS*, *vimāna*, 4, 7; and *SS*, *sūtra*, 10, 5).

While the above constitute the aspects ascertained by direct observation, the normal and abnormal tastes in the body are

understood only by inference. There is a prohibition against the use of tongue by the physician to understand the tastes (of urine, blood, and other discharges). The tastes that the patient experiences in his mouth may be ascertained by questioning the patient (CS, op.cit.)

The examination of the pulse (nāḍī) can be included under examination by touch (sparśa-parīkṣhā). But this is not to be found in the CS or in SS. Palpation and percussion are also included under the same head [See ASPECTS OF EXAMINATION, EXAMINATION OF TASTE, CLINICAL EXAMINATION, OBSERVATION, PULSE EXAMINATION].

Potent cause of disease: It is the predominant or strong (prādhānika) factor which invariably and urgently causes disorder of doshas and disease, like the administration of poison (visha) to a person (cf. MK on MN, 1, 4).

This is one of the four types of causes mentioned by Harichandra in *Upakalpanīyadhyāya*, the order three being immediate (samnikṛṣṭa), remote (viprakṛṣṭa) and abortive (vyabhichāri). [See NIDANA, AETIOLOGY (CLASSIFICATION)].

Prādhānika-nidāna: [See POTENT CAUSES OF DISEASE].

Praita-sattva: A personality type of the patient, characterized by traits distinguishing the troublesome, disembodied spirit (preta) of popular imagination, gluttony, tortuous disposition, envy, lack of discrimination, impulsive nature, excessive indolence, frequent spells of dejection, miserliness, conceit and hatred, deformity in limbs and preference for darkness. The type belongs to the 'rājasic' group of people who are generally violent in temper, and prone to many ailments. [See PERSONALITY OF THE PATIENT].

Prājāplatya-sattva: A personality type of the patient, characterized by traits distinguishing

the mythical lord of the creatures, Prajāpati. The traits attributed to him are large progeny, energy, virtue, wisdom, purity, and freedom from envy and arrogance. The type belongs to the śattvic group of people who are generally healthy, long-lived, and happy. [See PERSONALITY OF THE PATIENT].

Praśna: [See INTERROGATION].

Premonitory Dreams: Dream is an activity of many forms on the part of the mind which has not been withdrawn from sensory associations, during the state of sleep when the sense-organs have ceased to function (AS, sūtra, 9, 40). Sleep is a state of the body channels being covered over with kapha and the sense-organs withdrawing due to fatigue (ibid., 39). In this condition, of semi-wakefulness and semi-sleep (nātiprasuptah, CS, indriya, 5, 42), the mind loaded with the three doshas is freed from the constraints of objective apprehension which is normal for the waking state; the mind may then (1) perceive in dream the very objects seen in wakefulness (dṛaṣṭa); (2) hear the very speech and sounds heard (śruta); (3) experience whatever has already been experienced (anubhūta); (4) apprehend whatever one desired while awake (prārthita); (5) imagine objects not sensorily cognizable or desired while awake (kalpita); (6) prognosticate future events (bhāvika); or (7) manifest the disorders of the three doshas (vāta, pitta, kapha), then called doshaja. (CS, indriya, 5, 43, also AHR, śārīra, 6, 61). The sixth variety of dream is said to have premonitory significance.

The CS (indriya, 5, 3-5) mentions that dreams may occur to a person as the prior forms (pūrva-rūpa) of diseases to which he may succumb, especially diseases which are malignant and fatal. The dream in which he is riding a dog, a camel, a pig or an ass in the southernly direction, indicates that the person will be afflicted by tuberculosis

(yakshma); the dream in which he is drinking wine in the company of the people who are dead indicates that he will suffer from a serious type of fever (ghora-jvara); the dream in which the sky appears near and like a cloth dyed red indicates an imminent attack of haemorrhagic diseases (rakta-pitta); the dream in which a thorny creeper has grown on his chest indicates a severe and probably fatal attack of abdominal tumour (gulma); the dream in which he being naked, and his body smeared with ghee, is pouring oblations into the fire in which flames do not rise, or finds that a lotus flower has grown on his chest, indicates an attack of severe leprosy (kushṭha); the dream in which he is enjoying, in the company of outcastes, many kinds of unctuous drinks indicates an attack of urinary disorders of a grave nature (prameha); the dream in which he finds himself drowned in water while dancing with people who are no longer alive indicates an attack of insanity (unmāda); the dream in which the spirit of a dead person catches hold of him while dancing wildly and in a drunken condition indicates an attack of epilepsy, apasmāra (CS, op.cit., 8-25).

There are also premonitory dreams which are terrible in character (dāruṇa), foretelling great suffering and imminent death (CS, op.cit., 27-39); dreams in which (1) a plant, a creeper, a shrub grows in his head and a bird, flying into it disappears; (2) he falls down while walking along; (3) he is caught in a cluster of bamboo shoots or in a thorny bush or in the mesh of an entwining creeper; (4) he is stretched on the ground, on an ant-hill, or a bed, or on ash, in a ditch, or in the burning grounds; (5) he is drowned in a muddy pool of water or in a dark well, or he is carried away in a swift-flowing stream; (6) he has lost both his footwear, or skin has come off his feet; (7) his teeth, or a light, suddenly goes out, or a hill is torn asunder; (8) he has entered into a dark cavern or a dense forest flaming with bright red flowers,

or has passed into the yawning earth; and so on.

Some general dreams are mentioned which forebode ill-health in a normal person and death in a sick person: dreams in which are seen persons, who are naked or clean shaven, who wear red clothes, who are deformed or ugly, who carry long ropes, who are engaged in killing, or striking, who are in the southern quarter or who ride buffaloes, camels or asses; dreams in which the dreamer falls from a great height, falls in water or jumps into the fire; or dreams in which he is killed by beasts or eaten by fish; or dreams in which he closes his eyes, or the light goes out, or he drinks oil or liquor and such others (SaS, I, 14-21).

On the other hand, there are dreams which indicate recovery of health in a sick person: dreams in which the dreamer meets kings, friends who are alive, or sees cows, sacrificial fire; dreams in which he crosses over muddy pools, conquers enemies, climbs mansions, wears clean garments, or sees flowers and meat (ibid., 22-26). [See DREAM].

Premonitory signs: In some of the medieval texts of Indian medicine (like AS, śārīra, 12; AHr, śārīra, 6; SaS, I, 12-13; and YR, I, 31-34) omens and auguries (śakuna or nimitta) of various kinds are mentioned as premonitory signs for the recovery or death of the patient. They are often related to the messenger (dūta) who is sent to summon the physician, or to the physician on his visit to the patient.

The premonitory signs are either favourable (śubha) indicating success in the physician's task or fulfilment of the messenger's mission, or unfavourable (aśubha) indicating the incurability of the disease and the probability of the early death of the patient (rishta). They are not specific to the diseases or to the patients (except for a passage in AS, op.cit., 11), but are general in import and universal in applicability. In fact, the medical

texts have adopted this detail from the so-called system of omens and auguries (*śakuna-śāstra*) which is little more than documented popular beliefs. The folk ideas of prognostication were originally dependent upon the interpretations given to the appearance, movement and cries of vultures or eagles (*śakuna*). The need for prognostication was especially felt when one embarked on important activities like construction of house, marriage negotiations, business transactions, war, and treatment of disease.

In the medical context, the day on which the patient took ill, the month, the time when the physician is summoned, the time when the physician arrives, the omens which the messenger (informant) sees when he meets the physician, and which the physician sees when he approaches the patient's house are some of the details that are considered significant in ascertaining how the patient responds to the treatment being given.

If the physician is summoned at dawn, dusk, noon or midnight, on the fourth, sixth or the ninth day of the Hindu month, or on the new-moon and full-moon days, or during eclipse, or in certain constellations (like *bharaṇī*, *kṛttikā*, *ārdra*, *āśleshā* etc.), it does not augur well for the patient (*AS*, op.cit., 5). When the physician starts out (*prasthāna*), while he is on the road (*gamana*), and when he enters the patient's house (*praveśa*), premonitory signs are watched. Long lists of such signs are given in some of the texts (like *AS*, *AHr*, and *YR*).

If, when the physician starts from his house to visit the patient, he encounters a cow, a man carrying an umbrella, a learned brahmin, an unmarried girl, a person carrying curds, wine or meat, a person singing with happiness, a chieftain, a prostitute, an elephant or a horse, the probability is that the patient will be cured and rendered whole-some.

If, on the road, a snake, a cat, a monkey or a garden lizard crosses his path, or he sees a

black sparrow, a crow, a dog, an owl, or a donkey to his left, a cow with the calf, or a woman with her child coming along the road towards him, a washerman carrying washed clothes approaching, a party of musicians (with musical instruments like flute, lute, conch, drum etc.) or *veda*-reciters walking along, the indication is that the patient will be cured.

When the physician is entering the patient's house, the sight of a black sparrow, a crow, a dog, an owl, or a donkey to his right is a favourable sign according to *YR* (I, 31-34); but sight of an owl, a cat or a garden lizard on any side is unfavourable, according to *AHr* (op. cit., 25; also cf. *AS*, op. cit., 10). Some sounds are regarded as specific and favourable indicators: hearing of the slashing or splitting sounds (*chheda-śabda*) in diseases like enlarged lymphatic gland (*granthi*) and tumor (*arbuda*); of breaking or puncturing sounds (*bheda-śabda*) in diseases like abdominal tumour (*gulma*) and enlargement of abdomen due to dropsy (*udara*), of obstructed sounds (*ruddha-śabda*) in diseases like diarrhoea (*ati-śara*) and haemorrhage troubles (*rakta-pitta*); and of moving sounds (*pravartana-śabda*) in diseases like calculus (*aśmarī*) and tympanitis (*udāvarta*) (*AS*, op. cit., 11).

Presumption: Presumption (*arthāpatti*), or reasoning by implication, is one of the means of valid knowledge (*pramāṇa*) accepted by the Nyāya and Vaiśeṣika schools of thought (*NS*, 2, 2, 1f) and hence by the Indian medical systems (cf. *CS*, *vimāna*, 8, 48 and *SS*, *uttara-tantra*, 65, 21). But it is not recognized as an independent instrument of knowledge; it is generally covered under inference (*anumāna*). The *CS* however knows it as 'arthaprāpti' (op.cit., *CHKP*, *arthaprāptir ity, arthāpatti ity arthāt*).

It is defined as the supposition of a thing on the ground that a thing, seen or heard, is otherwise not possible (*PRASASTAPĀDA*); it is

explained that it is another thing which follows as an implication of the thing that is stated (VĀTSYĀYANA).⁵⁷ Vātsyāyana supplies an example: When the clouds are not present, it is presumed that it will not rain, for it does rain when the clouds are present. The argument assumes the form

If not A, not B

ergo, if B, then A

The principles followed are that the production of an effect will not preclude the presence of the cause, and that from the negative comes the opposed affirmative.⁵⁸

It is usual to distinguish two varieties of reading between the lines (arthād āpadyate it): 'seen' (dr̥ṣṭa) and 'heard' (śruta). An illustration of the former is: Devadatta is alive, but is not at the moment at home; therefore he must be elsewhere. The latter variety is illustrated by the following: Devadatta is fat, but does not eat by day; therefore, he must be eating at night. While PRAŚASTAPĀDA would accept this distinction, VĀTSYĀYANA does not. However, the former takes arthāpatti as little more than inference by opposition (virodhyan).

The CS (op.cit.) enumerates arthapatti while giving the list of logical terms for debaters, like purpose (prayojana), doubt, (samśaya), inquiry (jijñāsā), determination (vyavasāya), defective statement (anuṣṭyā) and so on. It is defined as the understanding of something which is not stated from some other thing which is explicitly stated; in other words, it is understanding by implication. The example given is that if the disease is said not to be cured by nourishing therapy (santarpana), the implication is that the disease can be cured by the emaciating therapy (apatarapana). Another example is also given: if it is said that a patient is not to eat during the day, the implication is that he is to be fed at night.

The SS (op.cit.) also speaks of understanding by implication (arthāpatti) while giving a list of 32 methodological notions employed in

a scientific discussion (tantra-yukti). It is defined as the indirect deduction of the sense of the sentence when it is not specifically mentioned. The example given is that when one declared that he would eat solid rice (odana), it follows that he would not like to drink rice-gruel (yavāgu).⁵⁹

Prognosis: Diseases are classified mainly into two types with regard to their prognostic value: curable (sādhya) and incurable (asādhya). Each of these types is again classified into two varieties: 'curable easily' (susādhya) and 'curable with difficulty' (krcchra-sādhya); 'incurable but manageable' (yāpya); and 'altogether incurable' (anupakrama) (AHR, sūtra, 1, 29-30). The SS however recognizes only three types: curable, incurable but manageable and altogether incurable.

(1) Diseases that are curable easily are handled without difficulty (sukha-sādhya), cured by easy (viz. simple) remedial measures (sukhopāya), and in a brief period (kālenāl pena) (AS, sūtra, 1, 29). In this case, the patient should have a physical constitution that can withstand all kinds of drugs and treatment procedures (including surgery, sarvaushadhakshame dehe), he should be young (yūnah, though not a child or an old person), a male (pumān, for women are timid and delicate, and therefore cannot withstand strong drugs and severe treatment methods, and will be in special physiological conditions like pregnancy (SaSu on AHR, op.cit, 30; also ARH on same), restrained in mind (jitātmā); the disease should not have entered the vital parts (like head and heart) (amarma-ge), it should have a trifling cause (alpa-hetu) and should be in its early state of onset (agra-rūpa); and there should not be secondary diseases or complications (anupadrava, AHR, op.cit., 30).

There is another consideration for the diseases that can be cured easily: dissimilarity (atulya) of the disease with the body con-

stituents that can be vitiated (dūshya), the place of residence (deśa), the season that is on (rtu), and the patient's constitution (prakṛti, *ibid.*, 31). If, for instance, the pitta has been vitiated, but it has not entered adipose tissue or bone-marrow, the country is marshy, the season is winter, and the patient's constitution is vāta, then the aggravated pitta is easily handled (*SaSu* on above).

Further, the four aspects of treatment (physician, patient, medicine and attendant) being adequate and available (pāda-sampat), cure of the disease is greatly facilitated (*AHr*, *op.cit.*, 31). If any one of the four aspects is improper or defective (pādāpachārāt), even the curable disease becomes incurable (*AS*, sūtra, 2, 36); but when all the four are excellent, even the incurable disease becomes curable (*ibid.*) [*See FOUR PROPS OF MEDICAL PRACTICE in Volume II*].

Besides the above, when stellar constellations (graha) become favorable and benevolent (anugūṇa), the disease is easily cured (*AHr*, *op.cit.*, 31). And when the pathway of the disease is single (eka-mārga) that is, it is either internal, ābhyantara, or external, bāhya, or intermediate, madhya, then also the disease is easily handled. The expression 'single path' (eka marga) is also taken to mean the vitiation of a single dosha (vāta, pitta or kapha), and not vitiation in pairs, or of all three (*SaSu* on above).

If the disease is new (nava), and has not become chronic, then too, it is easily cured (*AHr*, *op.cit.*). Diseases of more than a year's duration are generally incurable (*SaSu* on above).

(2) Diseases that are cured with difficulty are those that require the employment of complicated methods (kṛcchrair upāyaih), and severe procedures (mahadbhiś cha) like surgery, cautery, and toxic applications; and those that require a long time to come round (chireṇa). There is an involvement of the signs of incurability in such diseases, for the diseases themselves have a complex charac-

ter (*AS*, *op.cit.*, 30; *AHr*, *op.cit.*, 32). The aetiology (nidāna), early manifestation (pūrva-rūpa), and clear symptoms (rūpa) would all be prominent in such diseases; there may also be secondary diseases or complications.

The non-availability or inadequacy of the four aspects of diseases (physician, patient, medicine, attendant) may also contribute to the difficulty of handling such diseases. And the involvement of the vitiation of more than one dosha (usually two) may also be there. The diseases of infants, aged persons, women, and pregnant women are curable only with difficulty. Even when the patient is a youth, if he is not disciplined (restrained in mind), the disease becomes difficult to handle (*SaSu*).

(3) Diseases that cannot be cured but can be managed are those in which the characteristic of incurability is more prominent than that of curability. But because the life-span of the patient has not drawn to its end (śeṣatvād āyushah), the disease will not be fatal; and with proper and continuous prescriptions of food and conduct (pathyābhyāsāt), the disease even though incurable (viparyaye) can be kept under control and the patient rendered reasonably happy as long as his life-span lasts (*AHr*, *op.cit.*, 32).

It is like providing a prop (vishkāmbha) for a person who is falling down; it cannot sustain him forever. The disease in this category will not disappear or get cured, but its severity may considerably be mitigated or alleviated (hence called yāpya), so that the patient may live the rest of his life with some comfort and ease (alpaṁ sukhaṁ, *AHr*, *op.cit.*, *AS*, *op.cit.*).

The importance of management is highlighted here, for without proper treatment and care, even the curable diseases (sādhya) may become merely manageable (yāpya); the manageable ones may end up being incurable (asādhya); and the incurable dis-

eases may strike down the patient dead (ghnanti prāṇān). Therefore, medical treatment needs to be administered even to those whose life-span is uncertain (*BP*, I, 'varga', 13, p.78). As long as treatment is being given, the patient is comfortable, but he deteriorates as soon as the treatment is withdrawn (kriyāyām to nivṛttāyām sadyo vināsyati, *BP*).

Included under this category are diseases which have affected several of the body-constituents (dhātu), which have entered the vital parts (marma) and the joints (sandhi), which are due to the vitiation of two of the doshas, which are chronic in character, but which can be assuaged by proper diet and conduct.

(4) Diseases which are altogether incurable (anupakrama), which are inaccessible to treatment, nasty upakramah pratīkārāh, *AR*; or pratyākhyeya, that which must be rejected by the physician, or upekshya, about which the physician must be indifferent (*AS*, op. cit., 33) are characterized by states of confusion and distraction (bhrama), loss of consciousness (moha), indifference to comfort or life (arati), and loss of sensory faculties (aksha-nāśa); the various signs of the approaching end are also seen (dr̥ṣhta-rishṭa, *AHr*, op.cit., 33). This is the exact opposite (vipāryaya) of the easily curable variety (sukha-sādhya) of disease.

The disease here will be due to the vitiation of all three doshas, would have entered into all three pathways, internal, external and intermediary and would be accompanied by complication (upadrava). The patient would be extremely weak, and his span of life would almost be drawn to its close.

The knowledge of the incurability of the disease, however, should not make the physician withdraw his care or treatment. As long as the patient breathes, it is the duty of the physician to provide the treatment (tatvāt pratikriyā kāryā yavac chvasiti mānavah, *BP*, op.cit.), for God's grace or luck (daiva-

yoga) might at any time recover the patient to health and life. [*See PATHOLOGY*].

Pulse-examination: [*See NĀDĪ-PARĪKSHĀ*].

Purgation therapy: [*See VIRECHANA-KARMA*].

Pūrva-rūpa: The second aspect of the aetiological process which is five-fold, nidāna-pañchaka, occurring in the wake of nidāna (primary cause of disease) is pūrva-rūpa (literally prior or antecedent form), early manifestations or premonitory symptoms. It is suggestive of the fact that the doshas have been disturbed, and that disease is likely to set in. It is the precursor of some future trouble; and consists of symptoms that forebode a disease. However, the affliction is as yet undeveloped, albeit internal disturbance has definitely been indicated. It is likened to the collection of dense clouds in a characteristic manner which indicates heavy rains in the near future (viśishta-meghodayo vrshteh, *MK*).

It is defined in the *CS* as a symptom of a future ailment (nidāna, 1, 8, prāg-utpattilakshanam vyādeḥ, prāg-utpatti, being explained by *CHKP* as, utpatteh prāk, "bhāvi": prior to the production of a disease,) and it is explained as 'that by which the prior nature of the disease is indicated' (prāgrūpam yena lakshyate, *MK*, 1, 5, also bhāvi-vyādhi-bodhakam eva liṅgam, *AD*). The disease that tends to break out (utpitsur āmayah), but has not as yet obtained a footing in any specific dosha (dosha-viśeṣeṇa anadhishtītaḥ), for the diseased condition at this stage is but slight (vyādhir alpatvāt, *MK*, 1, 6).

It is usual to recognize two phases in pūrva-rūpa (1) general (sāmānya) and (2) specific (viśishta). In the former phase, all that is known is that some particular disease (like fever, dysentery) is likely to occur, and nothing more about the underlying dosha-disturbances, for the afflicting doshas and the

afflicted dūshyas (the seven bodily constituents or dhatu), are as yet indistinguishable (sammūrchchita). *MK* cites the definition given by PARĀŚARA (?): “pūrva-rūpa is that by which the particular disease that is to occur is indicated, but not the specific dosha that has been affected” (pūrva-rūpam nāma yena bhāvi-vyādhi-viśesho lakshyate, na tu dosha-viśeshah).

The example given is taken from *SS* (ut-tara-tantra, 39, 10). The general symptoms like the tired feeling, a disinclination to exert oneself, feeling of heaviness of body, pallor on the face, bad taste in the mouth, clouded vision, tears in the eyes, a feeling of cold creeping over the body, and so on indicate that fever is on its way. This is the first phase. But constant yawning suggests that the possible fever may be caused by the disturbance of vāta; burning in the eyes may be due to the disturbance of pitta, and aversion to food indicates that the fever that is coming on may be caused by the derangement of kapha. These are specific premonitory symptoms.

The pūrva-rūpa, thus, is the symptom not of a disease that has already set in (utpanna) but of a disease that is in the process of manifesting itself (utpatsymāna). In this context, ‘disease’ does not mean merely the general ill-health, characterized by the association of mind with misery (dukha-samyoga), but a specific disease as an actual and understandable collection of symptoms (lakshana-samudayātmaka) that the physician is able to observe, infer or get to know by questioning. The first phase herein consists in the identification of the specific disease (like fever, diarrhoea) that may ensue, while the second phase makes an appraisal of the dosha that may be at the back of this ensuing disease. The first phase finds the physician making a statement like: “Doshas have been disturbed; fever is on its way”, whereas in the second phase he would be able to say “The particular dosha (vāta) has been disturbed, and therefore the fever that is on its way

would be of this particular type” (cf. GAṆANĀTH SEN, *Siddhānta-nidāna*, II, 4 and 5).

Besides aiding the identification of the specific disease, pūrva-rūpa helps in ascertaining the curability or otherwise of the disease that is occurring. If the premonitory symptoms are slight, then the disease when it occurs could be cured easily. If, on the other hand, the premonitory symptoms themselves are grave and complex, then the disease is likely to be intractable. Further, the physician is guided by the pūrva-rūpa to determine the line of treatment; and he may even begin the treatment at the pūrva-rūpa stage like prescribing light food or fasting when fever is on its way. Even after the disease has manifested itself, the knowledge of its pūrva-rūpa as remembered will be a valuable aid in understanding the especial nature of the disease. [See also NIDANA].

R

Rājasa-sattva: The group of people who tend to be violent in their disposition (in bodily conduct, speech, or thought) are described as belonging to the ‘rājasa-sattva’. They are recognized by their strong emotions, excessive activity, tension and anxiety, unsettled thoughts, inclinations to cruelty, vices, and ambitions. People belonging to this group are further classified into six (according to *CS* and *SS*) or seven (according to *KS*) types. The word sattva here means temperament or personality, and not the quality of that name. [See PERSONALITY OF THE PATIENT].

Rākshasa-sattva: A personality type of the

patient, characterized by traits distinguishing the legendary demon (rākshasa): intolerance, cruelty, constant hot temper, gluttony and fondness for meat, indolence and fondness of sleep, envy, garrulity, revenge, aversion to virtuous living, fanaticism, self-praise, and readiness to wait for weak moments and strike. The type belongs to the rājasic group of people who are generally irascible in temper, and prone to many ailments. [See PERSONALITY OF THE PATIENT].

Relevance of age: Included in the ten-fold examination (CS, vimāna, 8, 122) is the ascertainment of the period of life (vayas) in which the patient is. The relevance of this detail consists in fact that the prevalence of a dosha is associated with the period of life or age, so that an individual is prone to particular disease while passing through each period of life (CS, vimāna, 8, 122).

The normal life-span of the human being is a hundred years, and this period is divided into three major age-groups (1) juvenile group (bāla); (2) middle group (madhya); and (3) senile group (jīrṇa).

The first group, (till 16 years) is characterized by immaturity of bodily constituents, non-development of faculties, incapacity for strains and non-obtainment of strength. The body being tender and the prevalent dosha during this period being kapha, the individual is prone to be attacked by many diseases, especially of the kapha variety, which are quicker and more serious in their onset, and the response to treatment is slow.

The second group (till 60 years) is characterized by the full development of body and mind, naturity of all the bodily constituents, possession of strength, courage, zeal and ability to accomplish tasks both mental and physical, skill in memory and communication, and endurance. The prevalent dosha at this stage is pitta, and therefore the diseases that are likely to attack an individual easily and more often now are of the pitta variety.

The third group (till 100 years) is characterized by the degeneration of bodily constituents, loss of vigour, senility of sense-functions and mental process, poor memory, worn out strength and courage, and dependence. The dosha that prevails during this period is vāta; and therefore the individual is more readily prone to disease of the vāta variety (CS, ibid).

Remote cause of disease: The factors which are distantly or remotely causative (viprakṛshta or dūra) of disease; they operate for a length of time, before the disease manifests itself. The example given is that of the kapha accumulated in the person during winter (hemanta), as it is the normal seasonal effect, producing a kapha-disorder spring (vasanta). It presupposes the intervention of some time between the cause and the effect (cf. MK on MN, 1, 4; also Sarvāṅga-sundara on AHR, nidāna, 1, 2).

This is one of the four types of causes mentioned by HARICHANDRA in *Ūpakalpanīyaadh yāya*, the other three being immediate (sannikṛshta), abortive (vyabhichāri) and potent (prādhānikar). [See NIDANA AETIOLOGY (CLASSIFICATION)].

Rūpa: The third aspect of the aetiological process (which is five-fold, nidāna-pañchaka), occurring in the wake of pūrva-rūpa [See PŪRVA-RŪPA and NIDANA] is 'rūpa' or manifest symptoms and signs (the specific form which the disease assumes). Its synonyms are linga (sign), lakshana (characteristic or symptom), akṛti (the form of disease), samsthana (determinate appearance), chihna (mark), and vyañjana (indicator, CS, nidāna, 1, 9 and MN, 1, 7).

It is defined as the pūrva-rūpa (the premonitory symptom) itself which has now acquired definite expression (tad eva vyaktatām yātam rūpam ity abhidhiyate, MN, 1, 7). The commentary (MK on above) quotes without however approving the statement

ascribed to IŚWARA-SENA (?) that pūrv-rupa is the nature of the disease in an unmanifest condition, while rūpa is the same nature in the manifest condition (vyādheh svarūpam avyaktam pūrva-rūpam, yad vyaktam tad rūpam). These definitions follow the formulation in CS (nidāna, 1): 'the characteristic mark of a disease (līṅga) is the manifested condition' (prādurbhūta-lakṣhaṇam punar lingam). The distinction between the pūrva-rūpa and rūpa (or līṅga) of a disease consists in the former being the shape of things to come (bhāvi), while the latter is an actual state of affairs (vartamāna). The idea of rūpa also involves outward appearance of a configuration of symptoms indicating that the specific disease has already arisen (utpanna).

The expression līṅga (characteristic mark or symptom) used in CS (nidāna, 1, 9) is not to be understood as an instrument at the disposal of the physician to know the disease, but in the sense of being the source of the disease finally formed in samprāpti, [See SAMPRĀPTI] (MK, on MN, 1, 7; na hi sā vyādhi-jñāne lingam, kim tu kāraṇa-mātram). The expression also means that rūpa is not the same as the vyādhi (viz. disease), but only a specific indication thereof. The lay folk conceive an aggregation of symptoms as constituting the very disease, for what is fever, they ask, apart from loss of appetite, tiredness, disinclination to work, pallor of the face, aching of the limbs and so on? It is essentially a condition in which the doshas have become deranged (dhātu-vaishamya). The disease is a particular condition of the interaction between the doshas (vāta, pitta and kapha) and the dūshyas (or the bodily constituents, dhātu). The configuration of the various symptoms (samudāya) may be described as the disease; however, it should be borne in mind that the configuration as a whole is quite distinct from the constituents as parts. Loss of appetite and so on are all in their own nature merely so many disturbed functions (vikāra); they acquire the character

of symptoms (līṅga) only when they all indicate a disease in common (MK on MN, 1, 7).

The 'knowledge of manifest symptoms (rūpa) plays an important role in identifying the specific nature of the disease, because these symptoms (unlike premonitory symptoms) occur only when the disturbance of the doshas have attained a manifest condition. Such knowledge will also help the physician in ascertaining the severity of the disease and thereby the curability or otherwise. And without this knowledge, the physician cannot effectively embark upon a line of treatment.

Rūpa is of two kinds, or rather phases : general (sāmānya) and specific (viśiṣṭa). The latter refers to the individual symptom on which alone the nature of the disease rests, and which is an invariable concomitance of the disease, as burning sensation of body and mind (CS, chikitsā, 3) in fever, loose motions in diarrhoea (SS, nidāna, 40), coughing in cough, excessive urination and urine with traces in urinary disorders (SS, nidāna, 6), spreading in herpes (CS, chikitsā, 21), and so on. These specific symptoms are also called pratyātma-lakṣhaṇa (characteristic symptom, specific to the disease), avyabhichāri-lakṣhaṇa (invariant symptom) or, roga-pratiniyatalakṣhaṇa (differential symptom, peculiar to a disease).

The general symptoms, on the other hand, reveals the total nature of the disease, and it is of general import, like suppression of sweating and body-pain in fever (AD) [See SYMPTOM, PŪRVA-RŪPA].

S

Śakuna: Premonitory signs, omens or

auguries seen by the physician, or by the messenger (dūta) who comes from the patient, indicating the outcome of the treatment, or turn of the disease. There are favourable (śubha) or unfavourable signs (aśubha). The former foretell that the patient will be cured, while the latter suggest that the patient will grow worse and die (rishiṭa). The signs include the appearance and movement of human beings, animals, birds, natural occurrences (like a comet), the time at which the emergency occurs, and inanimate objects.

The expression literally means the systems of foretelling future events based on the appearance, movement and cries of birds (śakuna, especially vulture or eagle). A synonym of this word is nimitta (*AHr*, śārīra, 6, 17-39). [See PREMONITARY SIGNS].

Śakuna-sattva: A personality type of the patient, characterized by traits, distinguishing the predatory bird such as vulture (śakuni): passionate attachment, excessive fondness for food, footloose nature and wanderlust, non-acquisitiveness, intolerance, love of obnoxious food and vulgar speech, suspiciousness and timidity, wicked thoughts, lust, and gluttony. The type belongs to the rājasic group of people who are generally wicked and violent in temperament, and prone to many diseases. [See PERSONALITY OF THE PATIENT].

Samprāpti: The fifth and the final phase in the diagnostic process [See DIAGNOSIS, NIDĀNA], where the precise nature of the disease as well as the severity of the disturbances of the doshas are ascertained. There can be no successful treatment without this phase, which is usually translated as pathogenesis.

The Sanskrit word literally means arrival, attainment, appearance (from the root āp, to obtain, samprāp). The CS (nidāna, 1, 11) mentions that birth of a disease (jāti) and the coming or appearance of a disease (āgati) are

synonyms: accomplishment (nirvrtti) and production (nishpatti). Gananāth Sen explains that the word means the occurrence of a disease in well-defined manner (*Siddhānta-nidāna*, 1, p.49; samyang nirūpita-prakāra prāptir abhinishpattih). Thus, Samprāpti signifies the knowledge of the exact manner in which a certain disease has developed in the patient, and which comprehends all the conditions, internal as well as external that favoured the development of disease in him. By it, all that must be known by the physician about the disease is known. And the altogether specific nature of the disease (that is, specific to the individual patient, specific to the dosha that has been vitiated, and specific to the development of the disease) is known (aśeṣa-viśeṣa-prakāropalakṣita vyādhi-nishpattih: *Siddhānta-nidāna*, op.cit.)

Although the expression 'samprāpti' signifies, as pathogenesis, the appearance or the actual arousal of the disease (jāti or āgati), it does not refer only to the symptoms. The synonym āgati (the appearance) has been explained by CHKP. as the course of the cause of disease from its origination till the actual appearance of the disease (utpāda-kāraṇasya vyādhi-janana-paryantam gamanam). Thus samprāpti is the comprehensive picture of the disease that becomes available to the physician. It signifies the physician's arrival (which the word literally means) at the precise and therapeutically valid diagnosis. It also means the appearance of the disease as the end-result of the aetiological process begun in nidāna (antya-kāraṇa-vyāpāra-janyam; CHKP on CS, op.cit.).

While samprāpti reveals how the disease finally takes shape with all its symptoms and signs, it must not be construed as an indication of the disease (vyādhi-linga or vyādhi-bodhaka, which is a collection of symptoms). It is actually the disease itself (vyādhi-svarūpa); or rather the break-out of the disease, as a result of the doshas, that have been vitiated, straying into the various receptacles

in the body (āśaya), and arresting the normal channels (srotas) (*AHr*, nidāna, 1, 8 and *MN* 1, 10).

"The manner in which doshas (vāta, pitta or kapha, or any two of them or all of them), get vitiated, move about in the body, preferring specific sites (for lodgement and vitiation) in order to manifest the disease is known as samprāpti, the 'birth of the disease' or 'the appearance of the disease'. *AD* explains this statement with reference to fever (on *MN*, 1,10).

There is an argument about the value of samprāpti as a diagnostic tool. It is held that samprāpti points only to the disease that is already manifest. Diagnosis strictly concerns itself with the origin and development of disease in its unmanifest stages, and this aspect is known by other diagnostic aids like 'nidāna' and 'pūrva-rūpa'. However, knowledge concerning the specific causative action of the doshas that have become disturbed is an important aid. And, samprāpti as pathogenesis provides a complete picture of the disease from its primary causation to its final manifestation, while the other aspects like nidāna and pūrva-rūpa highlight only factors that prevail prior to the manifestation of the disease. However, it is true that samprāpti is not indispensable for the diagnosis of every disease.

Samprāpti as pathogenesis is not uniform for all diseases or for all patients; there are individual differences in the manifestation of diseases. Samprāpti is classified under five heads in order to facilitate a detailed account of pathogenesis of the disease: enumeration (samkhyā), determination of the relative importance of the doshas that are disturbed (prādhānya), minute consideration of partial or fragmented involvement of doshas in pathogenesis (vikalpa), the strength of the disease (bala), and the facilitating time for aggravation (kāla) (*AHr*, nidāna, 1, 9, *MN*, 1, 11).

While the *CS* (nidāna, 1, 12) speaks of

bala-kāla as a composite factor (meaning the time when the disease grows in strength), *AHr* (nidāna, 1,9) splits it into two factors bala and kāla, meaning "by the former the strength of the disease, and by the latter the time when it grows. It is usual for the 'variety' of the disease (vidhi) also to be mentioned in connection with 'samprāpti' (*CS*, nidāna, 1, 4). But it is more properly included under enumeration.

(1) Enumeration (samkhyā) refers to the number of diseases under a common head (like eight kinds of fever or jvara, five kinds of abdominal tumour or gulma, seven types of intractable skin diseases or kushṭha etc.). Enumeration is made either on the basis of the doshas that are vitiated (like the eight kinds of fever and the five kinds of abdominal tumour), or on the basis of class of disease (jāti, like the seven types of intractable abdominal tumour, *CS*, chikitsā, 7,13-20). In enumeration, only a general statement, or broad classification, is made, with no attempt to specify the peculiar nature of each of the diseases so enumerated.

Variety (vidhi) emphasizes differentiating principles, as when diseases are classified into two varieties: those which are caused by internal and constitutional factors, such as the vitiation of the doshas (nija), and those which are caused by external and adventitious factors, like weather, accident and so on (āgantuja). Or into three varieties caused by vāta, pitta and kapha. Or into curable (sādhya), incurable (asādhya), mild (mr̥du) and severe (dāruṇa) (cf. *CS*, nidāna, 1, 12, iv). While the number (samkhyā) proceeds to enumerate all diseases, even belonging to heterogeneous groups, variety (vidhi, also called prakāra or mode) distinguishes between diseases belonging to a homogenous group but differing in one of the details (cf. *MK* on *MN*, 1, 13).

(2) The second type of samprāpti, known as vikalpa, relates to the minute consideration of the particular dosha that has been vitiated

in the disease, and also of the measure in which the vitiation has occurred. In any disease, one of the doshas is vitiated; or two, or all three of them. Each of the doshas, however, has numerous aspects (*guṇas* or *aśās*); as the *vāta* being dry, cold, rough, subtle, light and unstable; the *pitta* being blue and yellow in colour, liquid, light, viscous, acrid, unpleasant in smell and warm to touch; and the *kapha* being viscous, cold, white, smooth, heavy and compact. Not all the aspects of a dosha will enter into the disease as manifest. What aspects have entered into the disease and in what measure are sorted out here.

"The strength of one or the other aspect of the doshas that have come together, in the disease that has manifested itself is known here as *vikalpa*". (cf. *CS*, *nidāna*, 1, 10).

The expression *vi-kalpa* is taken in this context to mean minute consideration (*viśiṣṭa-kalpanā*) of the partial involvement (*aśāśāśa*, the dosha as fragmented in terms of its manifold aspects) of the doshas. In some of the diseases (in all of which the vitiation of *vāta* predominates), we find the patient experiencing chill, shivering, slowness in articulation, mind wandering and so on, but not in other diseases of the same class. In some of the diseases (in all of which the disturbance of *pitta* prevails) the patient may be abnormally thirsty, may have burning sensation in the body, may tend to loose consciousness and so on, but not in other diseases of the same class. This is due to differences in the manifestations of the diseases. We get here an idea of the direction in which the different aspects of the doshas have developed, in order to manifest into a specific disease.

There are two varieties of *vikalpa-samprāpti* recognized: (i) relating to the doshas themselves (*dravyātmaka*), which doshas have entered into the manifested diseases, in what relative proportions, and in what degree of vitiation; and (ii) relating to the

aspects of the doshas (*guṇātmaka*) that enter into the picture and also their magnitude.

(3) The relative importance of the doshas is the main consideration in the third variety of *vikalpa* known as *prādhānya* (dominance, prominence). The consideration becomes irrelevant where the manifest disease is caused by only one dosha; there can then be no question of dominance (*prādhānya*) or subordination (*aprādhānya*). It is only in diseases caused by two or all three of the doshas that this consideration becomes meaningful.

The determination of which of the two doshas (in the diseases caused by two doshas) is more dominant than the other would guide the physician to plan the line of treatment. He would, in this case, speak of the more dominant dosha in the comparative degree (*tara*). Similarly, he would be guided by the consideration of which among the three doshas in the disease (caused by all three doshas) is most dominant (superlative degree, *tama*). *CS* (*nidāna*, 1, 12 iii).

For instance, in diseases caused by aggravation of *pitta* as well as *vāta*, if the determination of dominance reveals that *pitta* has aggravated (*vrddha*) but that *vāta* has aggravated even more (*vrddha-tara*), then the disease is caused by the aggravation of all three doshas (*sannipāta*); it may be that *vāta* has aggravated (*vrddha*), *pitta* has aggravated more (*vrddha-tara*), and *kapha* has aggravated most (*vrddha-tama*). Here the aggravation of *kapha* is the main factor, the aggravation of *vāta* and *pitta* is secondary in importance. Similarly, when the doshas become deficient and cause diseases, we speak of the 'more deficient' (*kṣhīṇa-tara*) and the 'most deficient' (*kṣhīṇa-tama*).

This consideration becomes especially significant in cases where many diseases have combined, or where symptoms and signs are many and varied, or where secondary diseases have started. It becomes necessary for the physician to ascertain which one of the diseases is the dominant one, so that he could

focus his therapeutic attention thereon. for instance, in fever caused by vāta and kapha, fever is the dominant factor, and, therefore, to be attended to; cough and cold are secondary. But in consumption, fever is unimportant so far as the physician is concerned; but it is the wasting character of the disease, or the damage to the lungs, that becomes important.

The determination of the prominence of a dosha, or of a disease, is made on the basis of the independent, or the dependent, character of the dosha or of the disease. (*AHr*, *nidāna*, 1, 10). The disease that has arisen on its own, or the dosha that has got vitiated all by itself, is said to be independent, whereas disease that appears (later) on the basis of another and earlier disease, or the dosha that gets vitiated owing to the impact of another dosha that has already got vitiated, is dependent. *AD* rightly points out that dominance and subordination are relative expressions (*prādhānyāprādhānyayoh parasparam sāpekshatvāt*).

(4) The strength or otherwise of the disease (*balābala*) refers to the full or partial complement of the aetiological sequences of the primary cause (*nidāna* or *hetu*), the premonitory symptoms (*pūrva-rūpa*), and manifest symptoms and signs (*rūpa*). When all three are distinctly found, the disease in terms of dosha-disturbances may be said to be strong or powerful. If only one or two of them are present, and even that only partially and not distinctly, then the disease is mild or weak (*doshānām balābalaviśeshau hetvādī-kārtsnyāvayava-vibhāvanayā*, *AS*, *nidāna*, 1, 11; *hetvādī-kārtsnyāvavaih balābala-viśeṣaṇam*, *AHr*, *nidāna*, 1, 11; *MN*, 1, 13; *teshām sākalyāt vyādher balatvam*; *teshām eva avayavaika-deśena abalatvam*, *MK* on above, cf. also *AD*).

When the diagnostic factors are evident, complete (*samagra*, *sarva-sampūrṇa-lakṣaṇa*, or *krtsna*), the disease is said to be hard to cure (*kaṣṭa-sādhya*), for it indicates

the severity (*gambhīra*) of the disturbance of the doshas. If, on the other hand, the factors are incomplete and indistinct, then the disease is mild (*uttāna*) and is easily cured (*sukha-sādhya*). It is also usual to recognize a middling degree of severity of the disease (*madhyama-bala*).

(5) The time (*kāla*) refers to the period when the disease tends to get aggravated (irrespective largely of the internal factors). The *CS* specifies this as *bala-kāla* (this is, *vyādhi-bala-kāla*, the period when the disease gathers strength). It includes (i) age (*vaya*) of the patient in terms of young (*bāla*), middle-aged (*madhya*), and old (*vrddha*); (ii) the time of the day (*ahās*) in terms of morning (*purvāhna*), noon (*madhyāhna*), and afternoon (*aparāhna*); (iii) the period of the night (*rātri*) in terms of early night (*pradosha*), midnight (*ardha-rātri*), and the last watch of the night (*pradosha*), (iv) the season of the year (*rtu*) in terms of spring (*vasanta*), autumn (*śarad*), and the rains (*varsha*); and (v) the steps of the digestive process (*āhāra* or *bhukta*), in terms of immediately after eating (*bhukta-mātra*), later when the food is being digested (*pachyamāna*), and still later when the food is fully digested (*pari-pakva*) (*CS*, *nidāna*, 1 and *AHr*, *nidāna*, 1, 11; *MN*, 1, 13) (*kāla* is explained as “*vyādhi-vrddhi-hāni-hetu-kalah*” *MK* on *MN*, 1, 13).

The physician examines the time when the disease of the patient gets aggravated, and arrives at the diagnosis concerning the particular dosha that is involved. If, for instance, the fever gets aggravated in the spring season, in the morning, in early night, or as soon as food is eaten, then the fever is caused by the vitiation of kapha, for the dosha tends to aggravate during these periods. If, on the other hand, the fever increases in the autumn season, at noontime, at midnight, and quite some time after the food is eaten then the fever is caused by the vitiation of pitta. If.

however, the fever increases in the rainy season, during afternoons, in the last watch of the night, and when the food eaten has been digested fully, then the fever is caused by vāta. During the early years of life, kapha tends to dominate, during the middle-age pitta, and in old age vāta. (SS, sūtra, 35, 31).

Samnikrshṭa nidāna: [See IMMEDIATE CAUSES OF DISEASE].

Samśamana: This is one of the two important divisions of internal medicine or kāya-chikitsā (the other being Samśodhana) [See THREE METHODS OF TREATMENT]; it signifies curative or corrective treatment through drugs, food, and conduct, by normalizing the doshas that have become errant.

The Sanskrit expression (*śama + lyut*, meaning peace, śānti as in *Pāṇini* 5, 1, 38), signifies that the treatment contemplated here is intended completely to pacify the doshas that have been excited, without cleansing them or agitating the doshas that are normal (samyak śamayati, samyaktvam cha dushta-doshasya-nirharaṇa-pūrvakam śamanam, aduṣṭasyānudīraṇam; *NiS*, on SS, sūtra, 39, 7, where the following verse is cited: “na śodhyati yad doshān samān nodīrayatyapi; samīkaroti cha kruddhān tat samśamanam uchyate.”) The expression has also the sense of ‘counteracting’ (pratisamhāra) or pacifying the aggravated dosha, and stimulating the weakened dosha (vātasya śamanam kopanam vā, *Kāśikā* on *Pāṇini*, op.cit.).

The treatment under this head is seven-fold: (1) administration of digestive drugs or food (pāchana); (2) administration of drugs or diet which increases the appetite (dīpana, stimulative of the vital heat or jāṭharāgni); (3) actual fasting (upavāsa or kshudhā-nigraha, literally, restraining hunger); (4) restraining thirst (pipāsā or tṛṇnigraha); (5) physical exercise (vyāyāma); (6) exposure to sunlight (ātapa); (7) expo-

sure to fresh air or wind (vāyu, maruta). These are measures intended as langhana (CS, sūtra, 22, 18), calculated to render the body light and thin (yat kiñchit lāghavakaram dehe, ibid., 9)..

Fasting and thirst as therapeutic devices are suitable for patients whose diseases are of feeble strength; exposure to sunlight and wind for those with diseases of moderate strength; physical exercise, exposure to sun and wind, for patients who are strong and whose diseases are of moderate or feeble strength. Administration of digestive drugs are indicated where the disease is of moderate strength, and is caused by pitta or kapha.

Food is classified into three types according to the impact it has on the doshas: (1) Pacifying the dosha (dosha-praśamana); (2) pacifying the disease (vyādhi-praśamana), and (3) maintaining the balance of the doshas when they are neither aggravated nor weakened (svastha-vṛtti-kara).

Conduct, which is also instrumental in the pacification of the doshas, belongs to three divisions (1) physical or bodily (kāya), (2) vocal (vāchika), and (3) mental (mānasa). [See ANTAH-PARIMĀRJANA, KĀYA-CHIKITSĀ, SAMŚODHANA].

Samśodhana: One of the two important divisions of internal medicine or ‘kāya-chikitsā’ (the other being ‘samśamana’) [See THE THREE METHODS OF TREATMENT], it signifies wholesome cleansing (from śudha śuchau) of the physical system by sending out of the body the waste-products and by-products of metabolism (mala) and removing the excesses of the dosha (udīrayet bahir-doshān; yat śarīre dosham samyak śodhayati). Like samśamana [See SAMŚAMANA], this is also a device for achieving ‘langhana’ (also called ‘apartarpana’), employed in order to reduce the body-bulk (viz. rendering the body slim and light). It is distinguished from the methods adopted to enhance the functions of the body constituents or dhātus (brhmana, or samtar-

paṇa).

It consists of five therapeutic actions, emesis (vamana), purgation (virechana), oleus enemata (anuvāsana), non-oily enemata (āsthāpana or nirūha) and nasal insufflation (śiro-virechana). [See PAÑCHAKARMA].

The cleansing is recommended as beneficial prior to all methods of treatment, especially rejuvenation (rasayana). This is suitable for patients in whom kapha, pitta and blood as a body-constituent have been aggravated, in whom the waste-products and by-products of metabolism (*malā*) are copious, and in whom the vitiation of vāta is mixed-up with the vitiation of the other two doshas ('samspr̥ṣṭa-māruta'). However, it is contraindicated for persons who are not bulky or are weak (CS, sūtra, 22, 19). [See ANTAH-PARIMĀRJANA, KĀYA-CHIKITSĀ, PAÑCHAKARMA].

Sāra: The expression used in the CS, (vimāna, 8, 103-110) and the SS, (sūtra, 35, 16) in its masculine form, refers to the constitutional peculiarity, means strength....(balam), also the stable or enduring aspect of the constitution (sthiraṁśa, *Amara-kosha*, 3, 3 170); excellence (varam, *Medinī-kosha*); it is to be distinguished from the neuter form of the word, viz sārām which means essence (from *sr*, gatau), as this is not the sense in which expression is used in the CS and the SS. The etymology is sarah from *sr*, 'sthira' with the suffix ghaing, *Unādi-sūtra*, 3, 3, 17).

CHKP (on CS, op.cit.) explains that the word means "the bodily constituent which in is in its purest state" (viśuddha-taro dhātuh), namely, the constituent that is strong, stable or enduring, being least liable to disturbances (vikāra).

Eight 'sāras' are recognized in accordance with the seven body constituents (dhātu) and mind (sattva). The sāras are called tvak-sāra, rakta-sara, mamsa-sara, medas-sara, aṣṭhi-sara, majja-sara, sukra-sara and sattva-sara.

The SS (op.cit.) arranges these in the increasing order of excellence from the points of view of life-span (āyus) and prosperity (saubhāgya). The CS (op.cit., iii) refers to all these types as inferior to the type in which all the bodily constituents and mind are equally prevalent (sarva-sāra) which alone is perfectly immune to ill-health.

The physician is advised to examine the constitutional type to which the patient belongs for diagnostic and prognostic purpose. This is known as sāra-parīkṣhā. It includes not only the consideration of the patient's body-build and physical peculiarities (as in the SS) but also his behavioural dispositions and mental attitudes (as in the CS). [See CONSTITUTIONAL DIFFERENCES].

Sārpa-sattva: A personality type of the patient characterized by traits distinguishing the mythical dragon (sarpa): quickly-roused, constant, and intense wrath, timidity when not roused, quickness in reaction and readiness to strike, love of food and sports activity while awake but generally fond of sleep, vengeance and hatred, deceit and trickery. The type belongs to the rājasic group of people who are generally violent in temper, and prone to many illnesses. [See PERSONALITY OF THE PATIENT].

Śastra-pranidhāna: [See SURGERY].

Severity of disease: Diseases are grouped into four kinds with regard to their severity: easily cured (sukha-sādhya), cured with difficulty (kr̥cchra-sadhya), incurable but manageable (yāpya), and altogether incurable (asādhya or anupakrama). See PROGNOSIS. The four alternatives are arranged in two pairs; cured with difficulty and incurable but manageable are opposites (viparyaya); easily cured and altogether incurable are extreme opposites (atyanta-viparyaya).

The degree of severity is basic to this class-

ification; and it is ascertained by nineteen considerations: (1) some diseases are such that any drug or treatment may safely be administered and the disease is easily cured, others are amenable only to some drugs or certain treatments so the disease is cured with difficulty, and still others that do not yield to any drug or treatment and so are incurable; (2) diseases in youth (easily cured), in children, and in old age (cured with difficulty) and in special conditions of women like pregnancy (incurable); (3) diseases in men (easily cured), in women and eunuchs (cured with difficulty), and in special conditions of women like pregnancy (incurable); (4) diseases in persons who are disciplined in life and have self-control (easily cured), in persons who are given to normal sense-satisfactions or whose self-control is moderate (cured with difficulty), and in persons who are sensuous and erratic in life (incurable); (5) diseases which have not entered the vital parts (marma, like head and heart) (easily cured), which have entered the vital parts (cured with difficulty), and which have entered the 'life-taking' vital parts, (prāṇa-hara-marmāṅga, incurable); (6) diseases due to slight or simple causes (nidāna) (easily cured), due to more complex causes (cured with difficulty), and due to irreversible causes (incurable); (7) diseases with slight pathogenesis (samprāpti) (easily cured), with more complex pathogenesis (cured with difficulty), and with extremely complicated pathogenesis (incurable); (8) diseases with slight or early manifestations (pūrva-rūpa, easily cured), with complicated early manifestations (cured with difficulty), and extremely complicated early manifestations (incurable); (9) diseases with slight signs and symptoms (rūpa) (easily cured), with more complicated signs and symptoms (cured with difficulty), and with extremely complicated signs and symptoms (incurable); (10) diseases with no secondary complications (upadrava) (easily cured), with some secondary

complications (cured with difficulty), and with great secondary complications (incurable); (11) diseases involving dissimilar (viparīta) body-constituent which is vitiated (dūshya-dhātu) with reference to the disease-originating dosha (easily cured), involving similar (tulya) but one body-constituent which is vitiated (cured with difficulty), and involving similar and several body-constituents which are vitiated (incurable); (12) diseases involving dissimilar place of residence (deśa) with reference to the disease-originating dosha (easily cured), involving similar place of residence (cured with difficulty) and involving similar place where one has resided from birth (incurable); (13) diseases involving dissimilar season (r̥tu) with reference to the disease-originating dosha (easily cured), involving similar season (cured with difficulty), and involving similar and aggravated season (incurable); (14) diseases involving dissimilar constitution (prakṛti) with reference to the disease-originating dosha (easily cured), involving similar constitution (cured with difficulty), and involving but unfavourable constitution (incurable); (15) diseases where all the four props of medical practice (physician, patient, medicine and attendant) are available, adequate and excellent (pāda-sampat) (easily cured), where they are available but not adequate or excellent (cured with difficulty), and where they are not available, adequate or excellent (incurable); (16) diseases where the planetary positions (graha) are favourable to the patient (anukūla) (easily cured), where several planetary positions are unfavourable (cured with difficulty), and where all the planetary positions are unfavourable (incurable); (17) diseases which are caused by the violation of one dosha only (easily cured), which are caused by the violation of two of the doshas (cured with difficulty), and which are caused by the vitiation of all three doshas (incurable); (18) diseases which have but a single pathway

(mārga, internal, external or intermediary) (easily cured), which have several pathways (cured with difficulty), and which have all the pathways (incurable); and (19) diseases of less than a year's duration (vatsara) (easily cured), which have exceeded a year's duration (cured with difficulty), and which are of several years' standing (incurable) (AR on AHR, sūtra, 1,31) [See PROGNOSIS].

Smoke Therapy: [See DHŪMA-PĀNA].

Snehana: One of the six preparatory treatments [UPAKRAMA], it is the method of lubricating the system, internally or externally. The expression 'sneha' means any unctious substance, oil, fat, or moisture, and the treatment known as 'snehana' consists of anointing, unction, rubbing or smearing with oil (taila-mardana, abhyaṅga). It is usually referred to as oleation therapy, which is meant largely to counteract the vitiation of vāta (SS, sarva eva snehāt vātam upaghnanti).

It is normally performed before any eliminative treatment (śodhana-karma, like emetics, purgatives, enemata), is administered, for otherwise the eliminative treatment is likely to harm the body even as a dry stick breaks when forced to bend, without the application of oil or a little heat (AHR, sūtra, 18,59). It is done even before sudation (svedana), which needs to be done prior to any eliminative treatment. [See PANCHAKARMA].

The oleation substances are drawn from two sources: (1) from the vegetable world (sthāvara), like the sesamum or gingelly plant (tila, regarded as the best in this group), and (2) from the animal world (jaṅgama) like fish, animals, and birds (cow's ghee, animal fat, and bone-marrow) (CS, ibid, 9-11).

Four kinds of oleation substances are generally enumerated: (1) Butter from cow's milk (sarpi, regarded as the best among the

four); (2) bone-marrow (majjā); (3) animal fat (vasā); and (4) oils (taila, usually gingelly or sesamum) (CS, sūtra, 13, 13 and AHR, sūtra, 16,2-3). Butter derived from cow's milk (referred to as cow's 'ghee') is commended for use in autumn (śaradi, viz. end of rainy season, varshānte), and the rest in spring (mādhava). Oleation, in general, is not indicated when it is very hot or very cold (CS, sūtra, 13, 18). The four major oleation substances may be administered in combinations of two (yamaka, like cow's ghee, and oil), three (trivrt, cow's ghee, oil, and animal fat), or all four (when it is called mahā-sneha, (AHR, sūtra, 16, 4).

These substances are employed therapeutically as drinks (pāna), inhalations (nasya), enemata (vasti), or massage (abhyanga), depending on the requirements of the case.

This treatment is considered most profitable as a pūrva-karma (prior therapy), before the sudation-therapy (svedana) is administered, in cases where eliminative therapy (śodhana) is indicated, in eye-diseases (cataract), and for people who are alcoholics, sedentary in their work-habit, old, young, weak or lean and who indulge much in sex (AHR, op. cit.). But it is contraindicated for people who suffer from indigestion, fever, vomiting, anorexia, diarrhoea, throat-disorders, or intake of poison, and also for people who are very weak, obese, comatose, or tired.

The treatment must be given during day-time in winter and during the night in summer; people who have constitutions dominated by vāta and pitta must be given this treatment only during night, whereas people with vāta and kapha predominance must be given this treatment only during day-time. It must not be given on a very wet and sunless day (durdina) (cf. CS, siddhi, 1, 22-23).

The benefits of this treatment include the lustre of the skin, cure of constipation, good digestion, feeling of lightness in the body, sensory acuity, and mental alertness; the

treatment alleviates the vitiation of all three doshas, and endows vigour (CS, op. cit., 87-88). Proper oleation is suggested by easy evacuation of the flatus, soft and oily faecal matter, softness of skin and tenderness of body, restored digestion, feeling of lightness and an aversion for oily substances (CS, sūtra, 13, 58 and SS, chikitsā, 31, 53).

When the treatment is incomplete, the faecal discharge will be hard and dry, digestion is impaired, weakness is felt, vomiting may be there, burning sensation will be felt in the chest, and the skin will become dry and coarse. Excessive oleation is indicated by drowsiness, burning sensation in the anus, loss of appetite, inadequate formation of the faecal matter, stiffness and heaviness of the body, pallor on the face, watery discharge from the nose and mouth (CS and SS, op. cit.)

Stages of Disease: The onset of disease as a result of the vitiation of the doshas, and the developmental stages of the disease are known as Kriyā-kāla. They are six in number: (1) accumulation or stagnation of the doshas in their own locations (saṁchaya); (2) excitation, aggravation or provocation of the doshas thus accumulated (prakopa); (3) overflow or spread of the aggravated doshas to other parts of the body (prasara); (4) localization or limitation of the aggravated doshas in a specific site (sthāna-saṁśraya); (5) appearance of a specific disease (vyakti); and (6) interruption of the disease by natural forces or aggravation into chronicity when untreated (bhēda).

They are also stages of treatment (hence the expression kriyā-kāla, the time for clinical action). The first three stages are characterized by vague symptomatology and, therefore, are not in the nature of a specific disease, which may be clinically tackled. The fourth stage is prodrome (pūrva-rūpa, early or prior manifestation of the specific disease), a clearly clinical phase, followed by

the pattern of symptoms characteristic of a familiar ailment (rūpa, formal appearance of a disease). It is here that treatment is indicated, for unless treated the disease is likely to become chronic and in due course incurable. [See KRIYĀ-KĀLA].

Sudation Therapy: [See SVEDANA].

Śuddha-Sattva: The expression pure (śuddha) refers to the traits of the temperament or personality (sattva), which characterize the most evolved and sophisticated. The 'purity' of temperament comprehends physical cleanliness, decency in speech, and nobility of thought. People belonging to this group are further classified into seven (according to CS, and SS) or eight (according to KS) types. All the types, however, are recognized by their gentleness, generosity, benevolence, power of endurance, love of virtue, presence of mind, brilliance and selfless outlook. The word sattva here does not mean the guṇa of that name, but temperament or personality. Since this group of temperaments is characterized by the predominance of the sattva-qualities, it is called the pure type (Śuddha-sattva) instead of sāttvika-sattva. [See PERSONALITY OF THE PATIENT].

Surgery: The Sanskrit word for surgery is 'śalya' (literal meaning is dart, arrow, javelin, spear, an iron-headed weapon, from śalati gacchati, "that which moves"; but in its extended sense "any extraneous or foreign object lodged in the body and causing pain" (yat-kiñchid-ābādhakaram śarīre, NiS on SS, sūtra, 1, 6). There was an ancient discipline in India known as Śalya-tantra. Probably it owed its origin to the need for repairing, amputating and restitution of lost limbs of soldiers on the battlefield.

The earliest reference to surgery in India is to be found in RV (1, 116, 15): the Aśvins, the divine physicians, invoked by the sage Agastya appear on the battlefield, and in

night fit artificial legs (sadyo jangham āyasīm, legs made of iron, ayo-mayam pādām, commentary) to Vishpalā whose legs had been severed in the battle. There is also a reference in the epic *Mahābhārata* (Bhīshma-parvan, 121, 5745-66) that surgeons appeared before the great warrior Bhīshma to draw out the arrows and spears that had got lodged in his body; though he was suffering he, however, declined the services of these specialists "who were skilled in extracting foreign objects from the body" (vaidyāh śalyoddharana-kovidāh) and who had come equipped with all instruments (sarvopakaraṇair yuktāh). The Buddhist text, *Mahāvagga* (8, 1, 18), a work of the pre-Christian era, relates how the Buddha's personal physician, Jīvaka, conducted successful cranial surgery.

The CS (chikitsā, 13, 184) was acquainted with the work of surgeons (idam tu śalya-hartṛinām karma) and with the tradition of surgery (dhānvantariyānām) as an independent professional calling. It also mentions twelve surgical operations (śāstra-pranidhāna) as forming a category of treatment different from internal medicine and general therapeutics (sūtra, 11, 55). The SS is the sourcebook for surgical knowledge and practice in India. DHANVANTARI, the saintly King of Kāśī, is said to be the founder of this branch of treatment, and SUŚRUTA, the son of Viśvāmitra, is said to have inherited this wisdom from him. PĀLAKĀPYA'S *Hastyaurveda* (a veterinary manual dealing with the diseases and treatment of elephants) has borrowed extensively from the SS.

The SS (sūtra, 1, 6) gives surgery (śalya-tantra) the pride of place among the eight branches of Indian medicine. It defines surgery as "removal or extraction (ud-dharana) of extraneous objects (like pieces of grass, stone, dust, iron, bone, splinter, nail, hair, clotted blood, solidified pus), from the body, or the extraction of the dead foetus from the womb; and the employment of sur-

gical instruments blunt and sharp (yantra, śāstra), application of caustics (kshāra), and fire (agni); and also ascertainment and treatment of ulcers (vraṇa-niśchaya)".

Ḍalhana, the commentator, mentions that the extraction of extraneous or foreign substances (śalya) from the body is the significant aspect of surgery (śalyāharaṇa-pradhānam tantram, *NiS* on SS, sūtra, 1, 6); but he explains that by extraneous or foreign substances is meant not only objects outside the body (like stone, iron, dust) that have found lodgement in the body, but whatever is extraordinary growth inside the body due to constitutional disorders and therefore painful (op.cit., atipravṛddham mala-doshajam vā śarīre tat sarvam eva pravādanti śalyam). Śalya was, therefore, considered as belonging to two types: (1) extraneous or foreign (bits of iron, wood, bone that somehow got into the body), and (2) constitutional (caused by excrements, tumours, corrupted constituents of the body, like bad blood). Surgery is thus essentially a technique of immediate removal of distress by the employment of instruments (śāstra-pranidhāna). It is characterized by certain well-defined operations like excision (chhedana), incision (bhedana), scarification (lekhana), puncturing (vyadhana), and probing (eshana). [See SURGICAL OPERATIONS].

CS (sūtra, 11, 55) includes cautery (agni) and caustics (kshāra) also among surgical operations, as probably they were practised only by surgeons and not by general physicians. The SS (sūtra, 12, 2) in fact suggests that the employment of cautery is more effective than the employment of caustics or surgical instruments, for it cures the diseases more readily and will not allow the disease to recur as it may in the case of caustics or surgery (rogānām apunarbhavāt); besides these advantages, it can handle cases which are found incurable by drugs, caustics or by surgery (bhesaja-śāstra-kshārair asādhyānām tat sādhyatvā cha).

The preparation of the patient for surgery, performance of operations, and the post-surgical care of the patient have been dealt with in great detail; as also the diet for the patient in texts like the *SS*, *AHr* and *AS*. As regards the theoretical framework for surgical treatment, it is the same as for internal medicine. Consideration of the dosha-disorders is valid even here; and the principles of preventive and promotive health and hygiene (dinacharya, sadvṛtta) hold good for the other cases.

SS (sūtra, 7) not only describes the surgical instruments and appliances, but contains elaborate prescriptions regarding their preparation and care. [See SURGICAL INSTRUMENTS]. There were also hospitals (bhesajāgāra), where surgical operations were performed (*SS*, sūtra, 36, 15). The training of a surgeon included not only theoretical instruction (śāstra) but practical demonstrations with the help of a dead body (śodhayitvā mṛtam samyak drashtavyo nṛga-viniścayah); for the two together would enhance the understanding of the student of surgery (samāsatas tadubhayam bhūyo jñana-vivardhanam, *SS*, śārīra, 5, 47-48). It is suggested that dissection also was known to the ancient surgeons in India [See DISSECTION].

It is strange that the *SS*, *AS* or *AHr* contains no information about general anaesthetics that may have been employed as a part of preparation of the patient for surgery. It is possible that fermented drinks of some kind were used, for there are references to the use of strong wine prior to the operation (*SS*, sūtra, 17, 12; pāyayed madyam; commentary "yo vedanām na saḥate, tam tīkṣhṇam madyam pāyayet") for "the patient will then be insensible to the instrument" (mattah śas-tram na buddhyate, op.cit., 13). The *CS* (śārīra, 8, 31) recommends wine for the woman after the dead foetus has been extracted from her womb, for it will not only improve the condition of her uterus (garbha-koshṭha-viśuddhi), but make her insensible to the pain

(ārṭi-vismaraṇa). Later, however, inhalation of the fumes of burning hemp or some powder which makes one insensible (moha-chūrṇa) came into vogue. There is a reference in one of the literary works (*Bhoja-prabandha* by BALLĀLA-SENA) that a king was subjected to cranial operation after such inhalation of a drug called sammohinī and was revived after the operation by inhalation of another drug called samjivani.

The practice of surgery fell into disuse in course of time, and became increasingly unpopular among the physicians as well as people at large. The reasons for this are not clear. One of the reasons could be a general prejudice against violent methods of treatment. Likewise the instruments of surgery, cauterization and application of caustics also went out of favour. For the same reason, the application of leeches too was gradually discontinued. The hold of the idea of non-violence was so great on the Indian mind that along with these methods, dissection, which was recognized as a necessary aspect of training of the surgeon (*SS*, śārīra, 5, 47-48) also was given up. Besides the idea of non-violence, the taboos connected with the dead body, and of contact with blood also played a role in the decline of surgery in Indian medicine.

Even the *SS*, which is the source-book for surgery in India, and which placed surgery at the head of all branches of medicine, recognized the value of herbal medicine and advocated the administration of vegetable drugs for the majority of ailments; it minimized the scope of surgery and advocated the use of bare hand as the best of instruments (*SS*, sūtra, 7, 3; hastam eva pradhānatamam-yan-trāṇām).

Further, the outlook that developed among the physicians is illustrated by two verses to be found in *Mālinī-tantra* (10, 72-74): the verses say that surgery is useless unless accompanied by special medicines (divyaushadham vinā devi śāstra-vidyā su-

nishphalā), and that it deforms the person (vairūpyam kurute); and also that it causes the sources of trouble surgically treated to invariably reappear after a lapse of time (jāyante pātītāni punah punah). Indeed, the text asks, "is there a disease that can be cured by surgery alone, unaccompanied by herbal medicine?" (kim tatra śāstra-sādhyaṃ syāt su-siddhaiḥ bheṣajair vinā?).

Surgery was regarded as little more than physical mutilation, and was looked down upon as belonging to the 'demoniacal branch of medicine' (āsurī), distinguished from 'human' (mānushī) treatment by herbs, diet and regimen and 'divine' (daivī) use of rasa-preparations.

But it cannot be gainsaid that during the time that surgery was recognized as a respectable branch of medicine in India, its achievements were remarkable. Limbs were successfully amputated, abdominal sections were cleverly performed, fractures were neatly set, dislocations, ruptures and hernia were treated, haemorrhoids and fistula were removed, cataract-crouching was done, as many as fifty-one kinds of ophthalmic operations were conducted (SS, uttara, 8); sensible skin-flaps were transplanted and new noses were manufactured (plastic surgery), cleft ear-lobe was mended (SS, sūtra, 16), forceps were applied in difficult labour, several obstetric operations were performed, tumours were extirpated, splenic enlargements were treated, intestines were sutured, extraneous substances that found lodgement in the body and caused pain (bits of iron, wood and bone) were removed in fifteen different ways, paracentesis in dropsy was performed, vesical calculi were removed by lateral sectioning, bleeding was arrested by herbs, compression, hot oil and cold, and wounds in the head, face and windpipe were sewn.

Training in surgery that was given to the student was mainly oriented towards deft handling of surgical instruments meant for

specific operations (SS, sūtra, 9). The art of making incisions was practised on wax spread out on a board, on flowers, bulbs, and gourds; scarification was practised on fresh hides of animals (with hair intact); puncturing or lancing on the vessels of dead animals. Venesection was practised on stalks of water-lily; and evacuation practised on leather bags with water or on the urinary bladders of dead animals. The art of stuffing and probing was learnt by operations made on bamboo shoots and reeds. Suturing was learnt on pieces of cloth, skin or hide. Catheterization was taught on unbaked mud pots filled with water. For teaching ligaturing and bandaging, models and dummies were used. For teaching extraction, fruits with large seeds were used as models. The use of knives was taught to the student by making him practice on natural and artificial objects resembling parts of the human body. The emphasis was on acquiring manual dexterity in handling knives, scissors, lancets, saws, trocars, needles, bistouries, hooks, tubes, catheters, pincers and forceps. [See also SURGICAL CASES, SURGICAL INSTRUMENTS, SURGICAL OPERATIONS.].

Surgical Cases: The SS (sutra, 24,1) classifies diseases into those in which normal medical treatments like the administration of oils, purgatives, emetics, unguents, and diaphoretics are indicated (snehadi-kriya-sādhya) and those which require surgical intervention (śāstra-sādhya). The employment of the former procedures (oils, purgatives) is not prohibited in surgical cases; but surgical intervention is to be avoided in purely medical cases (SS, op.cit.).

Surgical cases have been grouped under eight heads (SS, sūtra, 5,3): (1) Where excision is necessary (chhedya), for example, fistula in ano, dark moles, wound-edges, tumours, abnormal growths, foreign matters in bone or flesh, fleshy growths, rotten ulcers, and abscesses on the penis and so on. (2) Incisions are suggested (bhedyā), like in

deep abscesses, growths, erysipelas, swelling of testicles, carbuncles, cysts on eyelids, ulcers on foot or penis and in fistulas. (3) Scarification is employed (lekhyā-scaring), as in throat inflammation, leucoderma, tumour on the tongue and other cases. (4) Puncturing (vyadhana) is indicated (vedhya), in diseased veins, hydrocele, and dropsy. (5) Probing is recommended (eshya, searching), in fistula, wounds containing foreign matter, irregular wounds and so on. (6) Extraction is indicated (āhārya, 'drawing out'), to remove from the body stone, gravel, tartar on teeth, foreign matter, dead foetus and so on. (7) Where drainage (or evacuation) is indicated (visrāvya), like in abscesses, local swellings, blood-poisoning, skin pustules, lepary skin-diseases. (8) Where suturing is indicated (śivya), for example, tumours originating in fat, open wounds and injuries on movable joints (SS, sūtra, 25, 1-8). [See SURGICAL OPERATIONS].

In accordance with these eight types of surgical cases surgical operations are also grouped into eight types. There were also surgical instruments designed to perform these operations. Surgical instruments were broadly two-fold: (1) blunt appliances (yantra), in six groups: forceps (svastika), tongs (saṁdamśa), tong-like appliances (talas), tubular instruments (nāḍi), bougies (śalākā), and clothes and twine (upayantra). Altogether 101 blunt instruments in number (including the human hand, which is the most important of all instruments), and (2) sharp instruments proper (śāstra) in twenty groups, and comprehending twenty-six instruments (Ahr) designed to facilitate the eight kinds of operations mentioned above. [See SURGICAL INSTRUMENTS].

In cases where surgery is indicated but the patient is afraid of the above instruments, or when the patient is a child, or when normal instruments are not available, it is suggested that the operations may be conducted through nail, finger, bamboo strips, crystal

edges, glass, a type of stone called 'kuravinda', or hair.

Besides the employment of the instruments mentioned above, use of chemicals or caustics (kshāra-karma) and actual cautery or therapeutic burning or branding (agni-karma) were the frequent modes of treatment by the surgeons. The former was used where incision (chhedana), excision (bhedana) or scarification (lekhana) was indicated. The mode was either external application (as in the cases of skin-diseases, fistula-in-ano, chronic ulcers, abscesses, sinuses, throat diseases and so on), or internal administration (as in the cases of poisoning, indigestion, liver-disorders, stone in the bladder, internal abscesses and haemorrhoids). However, this mode of intervention was not considered suitable in cases where the patient is very young, very old, weak, anaemic, pregnant, menstruating or in cases of fever, vomiting of blood, heart disease, or after taking purgatives in general oedema. Caustics were applied with a wooden spoon (dari), a rod (śalākā) or a brush (kuñcha), (SS, sūtra, 11; Ahr, sūtra, 11).

Cauterization is done by branding with red-hot probes (śalākā) or needles (sūchī) or with boiling fluids like honey, syrup, oil, and wax until the skin shrivels up with a bustling noise, and a foul odour emanates; and then ointments and plasters are applied. Honey, ghee, oil, treacle, piper longum, and other articles are used in the application. Cauterization is resorted to when the ailment cannot be treated by cautery, major surgery, or with drugs. Diseases in which cauterization is effective include tumours, fistula, swelling of the testicles, elephantiasis, swollen glands, bad wounds, headache, haemorrhoids and indolent ulcers. Conditions in which cautery must not be practised include prior application of caustics, presence inside the body of a foreign object ruptured intestines, and ulcers on the body (SS, sūtra, 12; Ahr, sūtra, 30).

Strictly not included under the head of

surgery, but frequently practised by Indian surgeons of the previous generations is blood-letting (rakta-moksha) by venesection (sirā-vyadhana), or through leeches (jalauka). Disorders like abscess, erysipelas, spleen and liver enlargement, fever, abnormal thirst, loss of appetite, salty taste in the mouth, disease of mouth, eyes, and head are ascribed to bad blood, which needs to be let out of the body (SS, sūtra, 13). The milder of the methods of blood-letting is by using leeches (the non-venomous varieties), and this was practised on children, old people and weak persons. Venesection is done with sharp instruments (like vrīhimukha), and is not indicated in children, old folk, pregnant women or patients suffering from asthma, anaemia, diarrhoea, oedema, cough and ascetics.

Surgical cases described in books include not only venesection and extraction of extraneous substances (śalya) from the body, but opening of abscesses, paracentesis abdominis, operative treatment of harelip, otoplasty, rhinoplasty, chelioplasty, herniotomy, laparotomy, extirpation of tumours, removal of ovaries and fistula, embryotomy, craniotomy, piercing of ears, mending the cleft earlobe, cataract crouching and several obstetric operations. The SS mentions as many as seventy-six varieties of ophthalmic diseases, among which fifty-one are surgical cases (uttara, 8); operations in each case are elaborately described. Haemorrhage was arrested by four different methods (SS, sūtra, 14). Blood vessels were tied by using styptics (lodhra), cold cautery, and manual pressure. Blood vessels were actually tied with cat-gut, horse-hair, fine threads and fibres from trees. Ants were used in intestinal surgery for suturing (sub-mucous) in order to avoid septic mucosa.

Surgical Instruments: Adapted to the requirements of different surgical operations [See SURGICAL OPERATIONS], a variety of instru-

ments were devised. The chief source of information about the forms, functions, and preparation of surgical instruments in ancient India is the SS (sūtra, 7 and 8; cf. also AHR, sūtra, 25).

Instruments for surgical operations are broadly classified into two groups: (1) blunt instruments (yantra) of 101 kinds (115 according to AHR) including appliances; and (2) sharp instruments (śalya) of 20 kinds (26 according to AHR). Among the blunt instruments, the human hand is said to be the most important (pradhāna-tama), for any other instrument can be used only by the hand and there is no other way (SS, sūtra, 7,3).

The instruments are usually made of iron (lauhāni), but when iron is not available they may be made by other metals. But they must be strong and steady (sudrḥāni), well-shaped (surūpāni), and facilitate a firm grasp (sugrahāni); their ends, however, must be rough and sharp (SS, op.cit, 8). They must be functional (yuktitaḥ kārayet) and prepared according to specification given in texts (āgamataḥ) or by expert's instructions (upadeśāt, ibid.). They must not be too large nor too small.

I. The blunt instruments are grouped into six varieties, with details as follows :

(1) SVASTIKA-YANTRA (cruciform instruments) inclusive of 24 kinds, all 18 angulas in length, with mouths resembling the mouths of beasts like lion, tiger, wolves, hyena, bear, deer, jackal or of birds like crow, cormorant, sparrow, vulture, owl and kite. Each of these instruments is composed of two pieces, joined together by a pin of the size of a masūra in the middle; their arms are turned inward to resemble a mace or a goad at the end.

(2) SAMDAMSA-YANTRA (pincer-like instruments) of two kinds, (a) sanigraha (or sanibandhana), with arms or bolts (forceps); and (b) anigraha (or nirnibandhana) without bolts (tongs). They are 16 angulas in length, and are used for extracting extraneous sub-

stances impacted in the skin, flesh, veins, or muscles.

(3) TALA-YANTRA (pick-lock-like instruments, shaped like the scales of a fish, *mat-sya-tala-vat*) of two kinds, (a) with a single blade (*eka-tala*) and (b) with double blade (*dvi-tala*). They are used to remove extraneous objects from inside the nose, ears or other external passages.

(4) NĀDĪ-YANTRA (tubular instruments, hollow) of many kinds and serving many purposes (*aneka-prakārāṇi*, *aneka-prayojanāṇi*). Some are with a single slit, some with two, some open at one end, and some open at both ends. Their functions may be to suck out fluid-discharges (pus) from cavities, extract extraneous and unwanted matter from the natural outlets of the body (*srotas*), and to make inspection of the channels, for making a diagnosis. Their size varies according to the uses. They include vaginal speculum (*yonyekshana*), rectal speculum (*arśo-yantra*), and wound syringe (*vranavasti*).

(5) SALĀKĀ-YANTRA (rods or probes, pickers, bougies) in 28 kinds, and in different sizes suited to various operations (probing abscesses and sinuses, raising a part after incision for the purpose of extracting the extraneous object, transferring of any object from one part to another, extracting extraneous objects from muscles and bones. Their shapes resemble earthworms, arrow-stems, fish-hooks, goads, buds, hoods of snakes, mortar with conical cavity and so on. They include swabs (*pramārjana*) and spoons (*khallamukha*).

(6) UPA-YANTRAS (accessory or minor instruments) of 25 kinds, including appliances like rope (*rajju*), bark of tree (*venikā*), bandage (*patta*), leather (*charma*), bark of tree (*valkālā*), creeper (*latā*), cloth (*vastra*), stones (*ashṭhila*), hammer (*mudgara*), ring of horses bridle (*aśva-kāṭaka*, also translated as the horses mane), branches of trees (*śākhā*), magnet (*ayaskānta*,

loadstone); parts of the surgeon's body like palm of the hand, sole of the foot, fingers, nails, teeth and tongue; medicinal operations like caustics (*kshāra*, potential cautery), fire (*agni*, actual cautery) and administration of herbal drugs (*bheshaja*); and behaviour such as splitting (*śtṭhivana*), massaging (or fluxing, *pravāhaṇa*), staining (*kunthana*), and exhilaration (*harsha*).

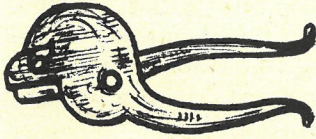
While the *SS* (sūtra, 7, 4) confines the use of these blunt instruments to the extraction of extraneous and painful substances from the body (*tatra maṇah-śarīrabādhākarāṇi śalyāṇi*; *teshām āharaṇopāyo yantrāṇi*), the *AHr* (sūtra, 25, 2) would also include the protection of healthy limbs in difficult operations as their use (*śeshāṅga-pari-rakshāyām*, *SS*, "svasthasyāṅgasya-śāstrādyabādhānivṛttyartham"). The latter text would include cupping, hair, gourd (hollow calabash) also under this head.

HS (3, lvi) enumerates only twelve kinds of blunt instruments, some with heads resembling birds and beasts (*godhā-mukha* iguana-faced, *grdhra-mukha*, hawk-faced); some with characteristic shapes like circular (*chakrākṛti*), ear-ring shaped (*kuṇḍalā*), three-faced (*tri-vaktra*), five faced (*pañcha-vaktra*); and other instruments like pincers (*samdamśa*), and horn (*śrṅga*).

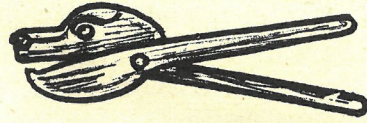
II. The sharp instruments are mostly knives, needles, saws, lancets, scissors. The twenty kinds of these instruments used in eight-surgical operations are (*SS*, *sufrā*, 8)

- 1) *maṇḍalāgra* (round-headed knife);
- 2) *karapatra* (saw, resembling the hand); these two being used for incision and scarification;
- 3) *vrddhi-patra* (razor, shaped like the *vrddhi-leaḥ*);
- 4) *nakha-śāstra* (nail-parer);
- 5) *mudrikā* (finger-knife);
- 6) *utpala-patra* (knife shaped like the *utpala* flower);
- 7) *ardha-dhārā* (single-edged knife); (called *adhyardhadhārā* in *AHr*);

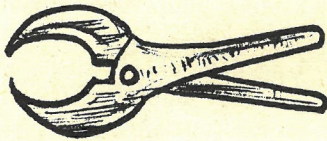
Surgical Instruments mentioned in SS



1. Vyāghra-mukha (tiger-faced)



2. Svana-mukha (dog-faced)



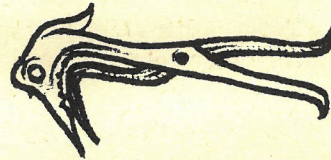
3. Tarakshu-mukha (hyena-faced)



4. Vrka-mukha (wolf-faced)



5. Bhrnga-mukha (bee-faced)



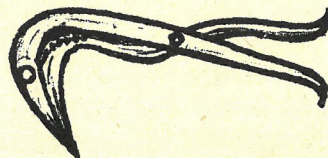
6. Kaṅka-mukha (heron-faced)



7. Riksha-mukha (bear-faced)

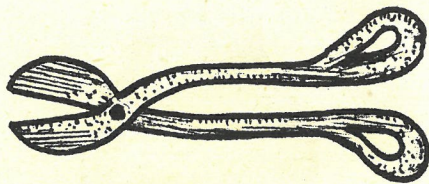


8. Simha-mukha (lion-faced)

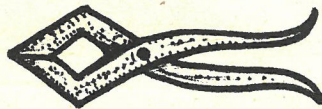


9. Kāka-mukha (crow-faced)

1 to 9 Svastika-yantras (Forceps for extraction of foreign matter lodged in the body)



10. Antarmukham (scissors)

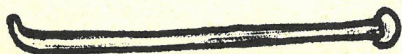
11. Kila-baddha-samdamsa
(gripping instrument)

12. Shaḍāṅga

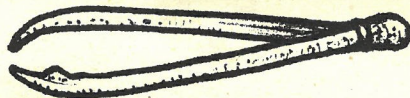


13. Vimuktāgra

12 and 13 Pincers for extraction of splinters from below the skin, flesh or deep-seated tissues.

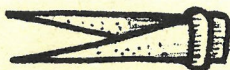


14. Ekatālam

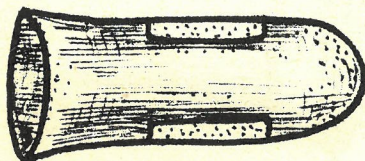


15. Dvitālam

14 and 15 Single-blade and double-blade picklocks for extraction of splinters, growth from inside nose, ear and other orifices.



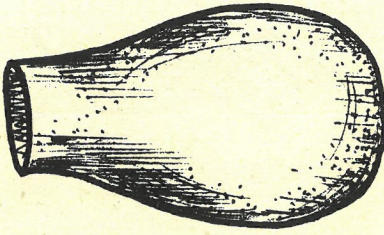
16. Muchuṇḍī (forceps)



17. Aṅguli-trāṇaka (finger-cap)



18. Srṅga (horn)

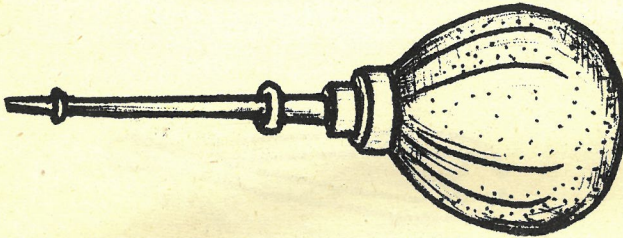


19. Alābu (gourd)

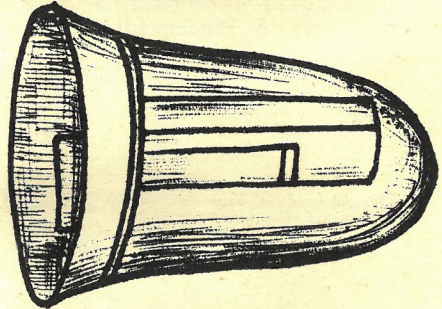


20. Ghati-yantra (pitcher)

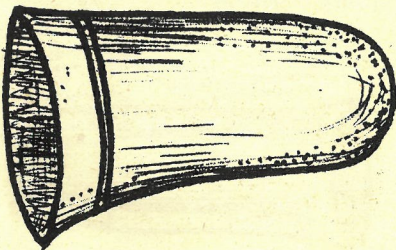
18 to 20 Instruments for cupping; for surgical bleeding, probing into bodily orifices etc.



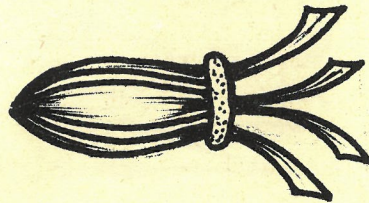
21. Uttara-vasti (urethral syringe or vaginal enema)



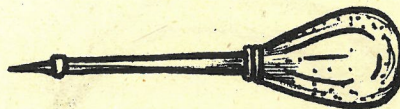
22. Bhagandara-yantra (used in fistula-in-ano)



23. Arso-yantra (used in piles)



24. Yoni-vraṇekshaṇam (used in vaginal examination)



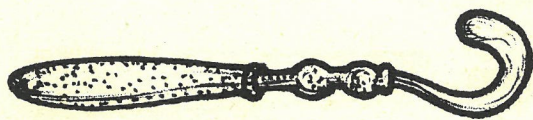
25. Nādi-vranābhyamjanam (used in washing away the pus of an abscess)



26. Dhūma-yantram (used for fumigation)

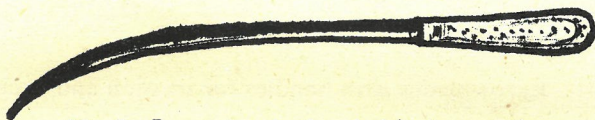


27. Mandalāgram



28. Maṇḍalāgram

27 and 28. Round-headed knives for scraping, scarifying and incising.



29. Sarpāsyā (snake-headed instrument)



30. Sarāri-mukha



31. Sarāri-mukha

30 and 31 Instruments for exudating and secreting.



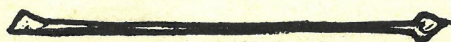
32. Vrihi-mukham (trocar of puncturing)



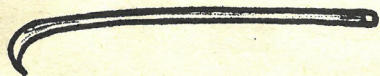
33. Kusa-patram (used for extraction of fluids)



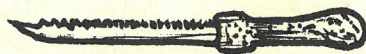
34. Trikurccham (trocar for evacuating abscesses)



35. Salākā (rod-shaped probe, bougies)



36. Badisa (sharp hook for extraction of foreign bodies)



37. Kara-patra (saw)



38. Vrddhipatra



39. Vrddhipatra



40. Vrddhipatra

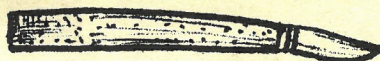


41. Vrddhipatra

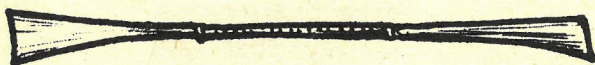
38 to 41. Razor-blades with handles for incision and excision.



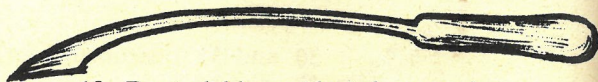
42. Utpala-patram (phlebotome)



43. Adhyardhapatra (scalpel)



44. Nakha-sastra (nail-parer; used for incising and excising)



45. Danta-lekhana (dental scraper)



46. Anguli-sastra (finger-instrument)



47. Karna-vedhini (ear-piercer)



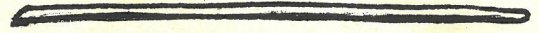
48. Karna-vyadhana (used in cutting by uplifting in the ear-cavity)



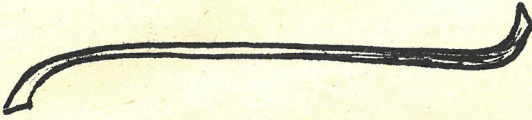
49. Karna-sodhana (ear-cleanser)



50. Pramajini (swab cleanser)



51. Eshaṇi (surgical probe for ascertainment of course of fistulous track)



52. Śalya-hāriṇī (used for removal of foreign bodies)



53. Asmaryāharaṇam (used in urinary calculi)



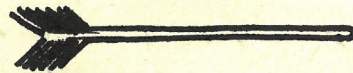
54. Jāmbavaūshtham (used for surgical probing)



55. Antra-vrddhi-dahana-salaka (used in hernia)



56. Vyūhana-śaṅku (hook or pincer for lifiting)



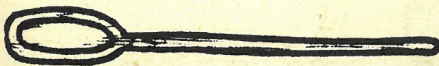
57. Chālana-sanku (hook or pincer for transferring)



58. Āharaṇa-śaṅku (hook or pincer for extraction)



59. Garbha-sanku (hook for foetal operation)



60. Naśārśorbuda-dāhana-salākā (used in nasal polyps and tumours)



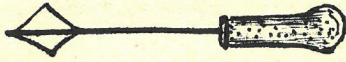
1. Danta-pātana-yantra (instrument for tooth-extraction)



62. Sanku (hook or pincer)



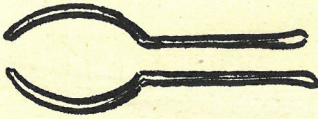
63. Ara (awl for puncturing)



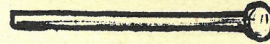
64. Danta-sanku (dental pincer or tooth scaler, used for extraction of sordes and tartar from tooth)



65. Yonyavekshana-yantra (used in vaginal examination)



66. Yugma-sanku (twin hooks)



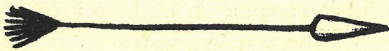
67. Snuhi-yantra



68. Tāla-yantra (picklock-like instrument)



69. Sūchi (needle for suturing or puncturing)



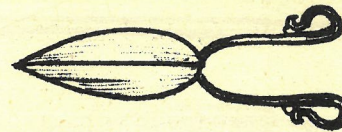
70. Nādi-yantra (tubular instrument)



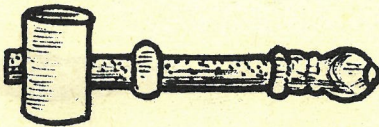
71. Ardha-dhārā (lancet or scalpel)



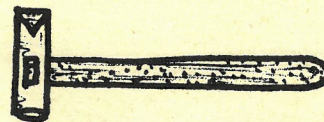
72. Āti-mukha (used for drawing fluids)



73. Antarmukha-kartari (scissors for evacuating abscesses)



74. Mudgara (hammer for loosening foreign matter embedded in bone)



75. Kuthārikā (mallet)

the above five being used in incisions and excisions;

8) kuśa-patra (knife in the form of kuśa-grass, *Eragostris cynosuroides*) called kuśāti-vadan in *AHr*.

9) sūchī (needle)

10) āṭīmukha (knife in the form of the beak of the bird known as Jalavardhanī or āṭī, *Turdus Ginginianus*)

11) śararī-mukha (a pair of scissors shaped like the beaks of Śararī birds);

12) antar-mukha (sharp edges turned inward);

13) tri-kūrchaka (thin-edged, sharp instrument; consisting of three needles);

the above being used for exuding (letting out pus from the deep-seated abscess);

14) kuthārikā (a small axe);

15) vrihi-mukha (trocar in the form of a grain of rice); called Vrihi-vaktra in *AHr*;

16) ara (awl, long sharp needle with a handle)

17) vetasa-patraka (shaped like the leaf of vetasa or rattan, *Calamus Rotang*); called vetasa in *AHr*;

the above being used for puncturing;

18) vadiśa (sharp hook shaped like fish-hook);

19) danta-śaṅku (tooth-scaler in the form of hook); called danta-lekhana in *AHr*;

the two being used for extracting solid substances from the body; and

20) eshaṇī (probe, director) being used in exploring the course of pus in the suppurated part of the body.

AHr (sūtra 26, 5f) adds six more to the above list:

(1) a pair of scissors (kartarī, different from (11) in the above list, used by barbers for cutting hair, but useful for the surgeon in dividing the nerves and ligaments); (2) ardha-chandrānana (scissors resembling half-moon in shape, used for letting out pus from an abscess; considered as a variety of the 12 above); (3) kūrccha (trocar) consisting of seven or eight round-shaped needles fixed to

a circular wooden handle, used for scarifying a bald patch or to remove brown and black spots on faces); (4) khaja (also consisting of eight rounded needles with sharp ends, used for bleeding the nasal polyp); (5) sūchī-mukha (a variety of probe or eshaṇī, used for extirpating new growths); and (6) karṇavedhanī (ear-piercer). It also mentions an instrument whose end is shaped like a snake's mouth (*sarpāśya*, *AHr*, sūtra). According to *AHr*, the instruments must be sharp enough to cut the skin (*loma-vāhīni*) and mostly six *aṅgulas* long (op.cit.); they must not be terror-striking (*a-karālāni*) (op.cit., 2); their forms must justify their names (*nāmānugata-rūpāṇi*); and they must be well-finished.

Sharp instruments become unfit for use if they are bent, too thick or too thin, too long or too short. Blunt instruments (specially of the *svastika* variety) are defective when they are made of impure metal or soft material, when they are shaped too thick, too long or too short, when they do not facilitate firm grasp, when the ends are fragile or sides thin, or when they are loose or elevated, and have weak points (*SS*, op.cit., 7). [See SURGERY. SURGICAL CASES]

Surgical operations: Surgical operations are classified into eight groups (*SS*, sūtra, 25, 1-29):

(1) 'Chhedana' ('chedya', incision, cutting), involving complete removal of a part of the body as in anal or rectal fistula, cyst, tumours and malignant growth, haemorrhoids or piles etc., lodgement of a foreign body in flesh, sloughing of ligaments, flesh or veins etc. by instruments such as *vṛddhi-patra* (knife-like razor), *kara-patra* (saw), *mudrikā* (finger-shaped knife), *śṛḍha-dhārā* (single-edged knife), *nakha-śāstra* (nail-trimmer) etc.;

(2) 'bhedana' ('bhedya', excision or division of a part), tackling the deep-going abscesses and malignant growths as in

abscess, erysipelas, swellings of testicles, or axillary cavity, diabetic carbuncles, round reddish gourd-like swellings on the auxiliary or inguinal regions, hydrocele, hernia, diseases of the mammary glands, cutaneous or pustular diseases, fistula-in-ano, stone in the bladder, keratitis and diseases caused by derangement of fat etc by the same instruments as mentioned above;

(3) 'lekhaṇa' ('lekhyā', scarification, scraping, sealing, or dissection of a skin-flap) in dealing with diseases like the inflammation of throat, leucoderma, tumour on gums, growths, abscesses, tumours on tongue, haemorrhoids, circular spots, increase of flesh etc., by instruments like karapatra (saw) and mudgalāgra (round-edged knife);

(4) 'Vedhana' ('vyadhana', puncturing and tapping, aspiration) employed in connection with veins, in diseases like abdominal dropsy and hydrocele or for venesection, by sharp and pointed instruments kuthārikā, Vṛīhi-mukha, sūchī etc.)

(5) 'eshāṇa' ('eshyā', probing, exploring) in diseases like sinus, fistula, wounds in which extraneous matter is lodged, and irregular wounds, by 'eshāṇī' (probes);

(6) 'āharaṇa' ('āhārya', extraction, drawing out) in case of solid and extraneous matter as urinary calculi, calcareous deposits on teeth, stone in the bladder, dead foetus in the uterus, foreign matter that has found its lodgement in the body, faeces in the constricted anus, etc., by spoons and hooks such as baliśa (shaped like fish-hook) and danta-śanku (hook, like a tooth-pick);

(7) 'śravaṇa' ('viśravaṇa', extraction of fluids, letting out evacuation of pus, secretion, draining) in diseases like deep-seated abscess, skin diseases, local inflammatory swellings, elephantiasis, tumours, erysipelas, cysts, localized collection of pus, syphilis, inflammation of

the mammae, worm-eaten teeth, swellings of the gum, skin pustules, etc., by instruments like sūchī (needle), kuśapatra (long, thin, knife-shaped like a blade of grass), atimukha (a long-pointed knife), sararī-mukha (scissors), trikūrchaka (three needles in one) etc; and

(8) 'sīvana' ('sīvyā', sewing, suturing, stitching) for open wounds (after the morbid matter is scraped out), instant or fresh ulcers at the joints, deep-seated wounds in abdomen by using fine needles with firm grip (sūchī) and with fine thread made of the bark of the āsmāntaka plant, vegetable fibre, silk, flax, hemp, sinew or gut (like cat's gut) or hair of tail of an animal (like horse etc.)

CS (sūtra, 11, 55) mentions under use of instruments (śāstra-pranidhāna) eleven kinds of operations, including application of caustics (kshāra) and leeches (jalauka). His list omits 'śravaṇa' in the above list (SS) but includes 'dāraṇa' (rupturing), 'utpātana' (up-rooting) and 'pracchana' (rubbing with a substance having rough surface). (SS SURGICAL INSTRUMENTS SARA)

AS (sūtra, 34, 23) mentions twelve surgical operations, including these mentioned by SS with the exception of viśravaṇa, and adding 'utpātana' (uddharana) raising up by incision, as by nakha-śāstra (mentioned by SS), (9) 'pātana' (incision as in sinus, abscess, etc); (10) 'pracchana' (scarification, distinguished from 'lekhanā', scraping); (mentioned by CS); (11) 'manthana' (churning as by the sharp instrument like reed-stick or khaja); and (12) 'grahaṇa' (fixing as by samdamśa). AHR (1, 26) adds to this list 'dahana' (burning as by śālāka).

If these are the operations to be performed by sharp instruments (śāstra), the following are the operations that can be performed by the blunt instruments (yantra) (SS, sūtra, 7, 17).

(1) 'nirghāṭana' (striking out extraction

of a foreign object from the body by moving it forward and backward) by instrument called śalya-nirghātānī;

(2) 'pūraṇa' (injection or filling) as in the cases of bladder or eye with oil;

(3) 'bandhana' (binding, bandaging) by ropes etc.;

(4) 'vyūhana' (up-lifting, raising up in order to remove 'ūrdhvi-karaṇa'); called 'samvyūhana' *AHr*), e.g. a thorn.

(5) 'vartana' (twirling, turning round 'vartulīkaraṇa');

(6) 'chālana' (movement of the foreign object in the body from one place to another, 'sthānāt sthānāntara-nayanam', transference, or shaking the foreign object in its own place 'śalya-kampana'; called in *AHr* 'chala')

(7) 'vivartana' (twisting, turning round of an instrument inside 'yantrasya bhrāmaṇam antare' called 'vyāvartana' in *AHr*).

(8) 'vivarāṇa' (exposing, opening up of a part of the body, especially the fleshy portion 'prakāśana', 'māṁsa-cchadvākṣādānena'; also expansion; 'prasāraṇa';

(9) 'pidana' (pressing by finger or an instrument to allow pus etc. to come out of the abscess, 'vraṇasya pūyādi-nir-gamanārtham aṅgulyādīnā);

(10) 'mārga-viśodhana' (clearing the passage e.g. rectum and urethra; called 'mārga-śuddhi' *AHr*);

(11) 'vikarshaṇa' (drawing off, extraction by catching hold of, 'vighṛhya karshanam) or loosening a foreign body lodged in flesh, 'māṁsādi-pratibaddha śalyasya mochanam');

(12) 'ālīraṇa' (pulling out, drawing away, 'ānāyana');

(13) 'anchana' (drawing to the surface, 'ishan-mukānāyana');

(14) 'unnamana' (elevating, uplifting and thus setting right what has been depressed, 'adhah-sthitasya ūrdhvam-nayanam');

(15) 'vinamana' (depressing, pressing

down, lowering, 'nimnī-karaṇa'; called 'namana' in *AHr*).

(16) 'bhañjana' (application of pressure, or rubbing alround a part of the body 'samantato mardanam');

(17) 'unmathana' (agitating or stirring the hidden pathway of a foreign body, 'praṇaṣṭasya śalyasya mārge ālodanam');

(18) 'āchūshaṇa' (suction of poison, milk or blood by means of a horn or a gourd or by mouth);

(19) 'eshanā' (searching or exploring with the help of a probe the location of the foreign object in the body or of a sinus etc.);

(20) 'dāraṇa' (splitting, cutting into two, clearing, ('dvidhā-karaṇam');

(21) 'rju-karaṇa' (straightening what has been bent 'kuṭīlasya');

(22) 'prakshālana' (washing with water etc., flushing of wound etc. ('toyādibhih vraṇotsangadinām');

(23) 'pradhamana' (blowing or stuffing in order to clean, e.g. powders into the nose with tubes);

(24) 'pramārjana' (cleansing, removing the foreign objects from eye etc 'prōcchana').

While *SS* lists twenty-four operations by blunt instruments, *AHr* (sūtra, 25,) lists only fifteen of them. [See SURGICAL INSTRUMENTS]

Svedana: One of the six preparatory treatments [See *UPAKRAMA*], it is known as sudation therapy, the technique of sweating, or causing perspiration with a view to correct the doshas (diaphoretic methods). It is also sometimes called the fomentation therapy, although methods of sweating without fomentation (niragni-sveda) are recognized, such as exercise, living in a hot residence, covering with warm garments, exposure to intense sunlight, application of poultices (up-anāha), experiencing great hunger or intense fear or violent anger (*CS*, sūtra, 14, 64-65 and *SU*, chikitsā 25, 26).

This treatment is a necessary prelude (pūrva-karma) to the five-fold therapeutic techniques (pañcha-karma, emetics, purgatives, enemata etc.), for without it the latter techniques are harmful to the constitution. And the treatment by sudation must follow the oleation therapy. [See SNEHANA, PAŪCHĀ-KARMA, SAMŚODHANA].

Broadly, this treatment is classified into two types: (1) wet fomentation (*snigdha-sveda*) with ghee, oily substances, vapour baths (moisture) etc. indicated in diseases caused by vitiation of vāta; and (2) dry fomentation (*rūksha-sveda*), with heated sand, brick, paddy-husk, powders, hot air-baths, sun-bath, indicated in diseases caused by vitiation of kapha. In diseases caused by vitiation of both doshas, the two methods of fomentation are alternated. Another way of grouping is: (1) partial (*ekāṅga*) or confined to some parts of the body, like poultices, fomentations as in diseases where vāta is localised, and (2) total (*sarvāṅga*) involving the whole body, indicated in general ailments like fever, obstinate vāta-disturbances and chronic diseases. When the pañcha-karma treatments are to be undertaken, the latter method is resorted to.

SS (*chikitsā*, 32, 3) classified sudation into four types: (1) application of direct heat to the affected part (*tāpa-sveda*), through such means as the palm of the hand, brass plate, hot sand, baked clay, or cotton heated over the fire of khadira-wood; (2) fomentation (*ushma-sveda*) through vapours from heated stone, brick; (3) poultices (*upanāha*), made by pastes of selected drugs; and (4) hot fluids (*drava*), by immersion in heated water mixed with decoctions of selected herbs, or sprinkling with such medicated water. The first two are useful in disturbances due to kapha, the third in disturbances due to vāta, and the last in disturbances where pitta also is involved (*ibid.*, 14).

The CS (*sūtra*, 14, 39-40) enumerates thirteen kinds of sudation: (1) *saṅkara* (also cal-

led *piṇḍa-sveda*), is the use of bolus prepared out of drugs; (2) *prastara* is the use of a mat of paddy-husk; (3) *nāḍi* is the system from decoctions; (4) *parisheka* is sprinkling or pouring over of heated decoctions; (5) *avagāhana* is the immersion or plunging in tubs filled with decoctions; (6) *jentāka* is to confine in a shed where selected fuel has been priorly burnt; (7) *aśma-ghana* to lie on a heated stone slab; (8) *karshū*, lying on a bed inside specially prepared pit where fuel has been burnt; (9) *kuṭi* is lying on a cot inside a compact shed, the walls of which are smeared with selected drugs; (10) *bhū* where the patient is required to lie on selected leaves like *eraṇḍa* or *arka* in a shallow pit, where fuel from selected trees has been burnt; (11) *kumbhika*, to sit or lie on the ground, below which a pot with steaming decoctions is buried with its mouth exposed; (12) *kūpa* is lying on a pit which has been dug in the shape of a well, wherein cowdung cakes, have been burnt; and (13) *holāka*, to lie on the ground where dried dung has been burnt. In all these cases, the body of the patient is previously smeared with oils calculated to remove vāta. SS (*op.cit.*, 12) adds *upanāha* (poultices on the affected limb, after application of suitable ointments, especially in diseases like paraplegia.)

Sweat (*sveda*) is an internal secretion, a byproduct of the body constituent known as *medas*, and its function is to regulate the watery content in the body (*kleda*). The total amount of sweat in the normal body is said to be ten *aṅgalis*, and it is contained in urine, faeces, ooze of the wounds (*lasika*), chyle (*rasa*), blood, and in the pores of the skin (CS, *chikitsā*, 15, 18 and *AHr*, *sūtra*, 11, 5). The watery portions of the body are cleansed by proper sweating.

The benefits of sweating are the removal of stiffness (*stambha*), heaviness, and coldness of the body; pain is alleviated; and sleep is regulated. The doshas are liquified by the heat and intensity of the sudation treatment,

and made to discharge their normal function (cf. *SS*, *chikitsā*, 32, 20-21). The treatment is commended in diseases like corryza, cough, hiccough, hard breathing, feeling of heaviness in body, pain in the neck, headache, earache, distension of abdomen, retention of urine, rigidity of the sides of the back, inflammations, pains, paralysis, etc.

However, when sudation is excessive, it brings about disturbances like aggravation of pitta, loss of consciousness (fainting), exhaustion, thirst, burning sensation all over the body, debility of the limbs, pain in the joints, pimples, and blisters (*SS*, *op.cit.*, 23). Sudation is not to be administered to delicate parts of the body like heart, testes and eyes, or when it is indicated, sudation must be very mild (*svedayen mṛdu, naiva vā*); groins and lower abdomen can stand moderate sudation; and the rest of the body may be subjected to sudation as the physician desires (*iṣṭatah, CS, op.cit.*, 10).

Sudation is to be administered to the patient only after carefully considering his bodily strength, mental vigour and age. Thus the treatment must be mild (*mṛdu*) for weak and old patients, or when the disease also is mild; intense (*tīkṣṇa*, or *mahān-sveda*) for patients who are strong; and moderate (*madhya*) for others (*CS, op.cit.*, 7-8). Alcoholics, pregnant women patients suffering from diseases like rakta-pitta, diarrhoea, urinary disorders, prolapsus ani and jaundice; persons who are exhausted, thirsty, hungry, agitated or depressed; persons who are obese, weak, emaciated or with reduced vitality; and persons with eye diseases like cataract (*timira*) are not suitable for this treatment (*CS, op.cit.*, 16-19 and *SS, op.cit.*, 24).

Symptoms: The indicators of a disease are known as 'rūpa' (symptoms) which include both subjective symptoms and physical signs. "The feeling of tiredness or fatigue, aversion to work, pale complexion, bad taste in the

mouth, constant yawning, body pain etc. are all symptoms of fever" (*SS, uttara*, 38, 10). Fever, aversion to food, cough, emission of blood, loss of voice are symptoms of phthisis (*śoṣha, ibid.*, 41, 4-6). "Dryness of mouth, burning sensation in the palate, throat, lips and mouth, vertigo, external heat, etc. are symptoms of abnormal thirst (*tṛṣṇa*)", (*ibid.* 48, 5).

The aggregation of symptoms, however, does not constitute a disease. Each of these symptoms is, in its own nature, merely a disturbed function; and is in fact the result of a general imbalance of doshas in the body called a disease. When all these disturbed functions (*vikāras*) indicate all alike some particular disease, they acquire the symptomatic character (*liṅga*). However, a configuration (*samudāya*) of symptoms may be described as a disease, bearing in mind that the configuration (the whole) is distinct from the constituents thereof (parts), even as the forest is distinct from individual trees in it (cf. *CS, nidāna*, 8). Disease is a configuration while the symptom is aspect-oriented (*samudāyāt-mako vyādhih, pratyekam tasya lakshanam; Gaṅgādhara*).

The symptoms of a disease are classified into two types, or rather recognized as occurring in two phases: premonitory or antecedent symptoms (*pūrva-rūpa*), and manifest symptoms (*rūpa*). The former are by definition (unmanifest, *avyakta*), for the disease has not arisen as yet (*prāg-utpatti-lakṣhaṇam vyādheh, CS, nidāna*, 1). They merely indicate a diseased condition that is approaching, or that is likely to occur (*bhāvi*). The latter, on the other hand, is symptomatic of the specific disease that is already manifested (*utpanna*) by a pattern of characteristic symptoms (*prādurbhūtalakṣhaṇam punar lingam, CS, nidāna*, 1) (cf. also *Siddhānta-nidāna I*, 4-6) [*See PŪRVA-RŪPA, RŪPA, NIDĀNA and DISEASE*].

T

Tāmāsa-Sattva: The group of people who tend to be indolent, inactive, dull, apathetic, dejected, indifferent to social values, averse to virtuous living, and incapable of thinking are described as belonging to the tāmāsa-sattva, where the word sattva refers to temperament or personality, and not to the quality of that name. Persons belonging to this group are further classified into three types (CS, SS and KS). [See PERSONALITY OF THE PATIENT].

Taste, Examination of: While the physician is advised to employ his sense-organs to observe directly the prevailing physical conditions in the patient's body, the employment of his tongue for ascertaining healthy or unhealthy 'tastes' of the several factors in the patient is excluded on account of its abhorrence, and because there are other methods of obtaining the same information (CS, vimāna, 4, 7). The physician is advised to infer the possible tastes of factors like urine, phlegm, blood, nasal discharge; and the patient may be interrogated for eliciting information concerning the tastes in his mouth (CS, ibid.). The SS, however, does not explicitly exclude the employment of the gustatory faculty in understanding the peculiar tastes in urinary disorders like sweetness of urine (SS, sūtra, 10, 5).

The bodily tastes may be inferred by the attraction or repulsion of insects like lice which are present in the body only as long as the tastes are normal. When insects are attracted towards the body, one may infer the sweet taste. When the blood that comes

out of the body (in diseases like rakta-pitta) is rejected by dogs and crows, then the indication is that the blood is impure, that it is vitiated by pitta. [See also OBSERVATION, INFERENCE].

Therapeutic Theory: Disorders of the doshas (vāta, pitta and kapha) being the main sources of disease, treatment is an attempt to correct the imbalances in the doshas that are morbid. The conditions in which a dosha is found can be four-fold: (1) deficient (kshīṇa), (2) excited (kupita); (3) increased (vrddha); or (4) balanced (sama). The last condition indicates health, but there is need to maintain this condition (paripālyah) by following the wholesome rules of conduct and diet (svastha-vṛtta). When the dosha is deficient, the therapist must aim at reinforcing it by drugs, and nutritive diet (bṛmhayitavyāh). When the dosha is excited, the treatment must be sedation or palliation (praśamayitavyāh). When the dosha is increased, the treatment aims at reduction by purging the poison or flushing the system (nirhātavyāh), (SS, chikitsā, 33, 3).

Three-fold Examination: In texts like *AHr*, (sūtra, 1, 21) and *BP* (I, 7, 1) clinical examination is regarded as three-fold: observation (darśana), palpation (sparśana) and interrogation (praśna). From observation, the physician ascertains the curability or incurability of the disease (severity, spread); from palpation or touch, the significant condition of the body like warmth, softness, hardness etc., and from interrogation, the lightness or heaviness of the stomach, appetite, thirst, strength and weakness.

Under observation, earlier texts (like *BP*, op.cit.) included the examination of the eye (netra-parīkshā, 3-7), examination of the tongue (jihvā-parīkshā, 8-9) and examination of urine (10). Under palpation was included pulse-examination (nāḍī-parīkshā, 11-22). The eight-fold examination was the

subsequent phase, and the three aspects mentioned above were elaborated to accommodate the earlier examination by the five senses (pañchendriya-parīkshā). An account of this may be found in YR (I, 35-131).

However, in still later compendiums (like *Vaidya-sāra-samgraha*), we find that the eight-fold scheme was given up, and the three-fold examination was revived. But the three aspects of the examination were defined as: pulse (nāḍī), tongue (jihvā) and urine (mūtra). [See EIGHT FOLD EXAMINATION, PULSE EXAMINATION, EXAMINATION OF THE TONGUE, URINE EXAMINATION].

Three Methods of Treatment: Disease being defined as the vitiation of one, two, or all three of the doshas (vāta, pitta, kapha) treatment is directed towards not only the riddance of this vitiation, but the elimination of the cause thereof (CS, vimāna, 7, 33; nidānasya cha varjanam). Three major lines of treatment are recognized in Indian medicine: (1) internal cleansing (antah-parimārjana); (2) external cleansing (bahih-parimārjana); and (3) surgical intervention śāstra-praṇidhāna (CS, sūtra 11, 55).

(1) Internal cleansing consists of two main procedures: (a) general cleansing of the entire physical constitution (saṁśodhana) through pañcha-karma (emesis, purgation, decoction enema, oily enema, and nasal insufflation) [See PAÑCHAKARMA]; and (b) general soothing of the constitution (viz. of the doshas, saṁśamana) through drugs, diet and regimen. [See SAMSODHANA, SAṂSAMANA].

(2) External cleansing involves extraneous administrations like oleation, sudation, bath, medicated gargle, fomentation, massage and so on.

(3) Surgical intervention involves the performance of eight surgical operations (incision, excision, scarification, puncturing, probing, extraction, evacuation and suturing with the help of sharp instruments (śāstra, 20 kinds) and blunt instruments (yantra, 101

kinds). [See SURGICAL INSTRUMENTS, SURGERY SURGICAL OPERATIONS]. It also includes potential and actual cautery (kshāra and agni), venesection, blood letting by leeches (See SURGERY].

Of the three methods mentioned, the third has for long become obsolete in the country owing to a variety of causes [See SURGERY]. The second has been prevalent among the practitioners (kāya-chikitsā). Even there, Indian medical practice is largely confined to the general soothing (saṁśamana) of the doshas through drugs, diet and regimen; and the general cleansing of the constitution (saṁśodhana), which is regarded as essential for effective 'soothing', is being increasingly ignored by the general practitioners. This is unfortunate because the purpose of the treatment is to pacify or redress the ailment; but in the process, another ailment should not be provoked. Proper treatment is that which makes the disease subside, and not excite another (CS nidana, 8, 23.) Sudhas tu samayed yo na kopayet. For this purpose, before curative treatment (saṁśamana) is resorted to, it is regarded as imperative that the constitution must be cleansed beforehand.

Traditional Lore: Classed under verbal testimony (śabda) as a means of valid knowledge, traditional lore (aitihya) is distinguished from verbal testimony inasmuch as it has, unlike the latter, no assignable author. It is only testimony which has been handed down through a succession of pronouncements (pravāda-pāraparya). Its characteristic introduction is with words like "thus it is said", "they say", without specifying who said it (itiho chūr iti anirdiṣṭa-pravak-trkam). Praśastapāda rejects its validity on the ground that it is, when true, not distinguishable from verbal testimony, which in turn can be reduced to inference (anumāna), and when untrue, the question of its validity does not arise.

The CS (vimāna, 8, 41) enumerates it under logical terms useful to a debater and

defines it as instruction from a reliable authority such as the scriptures (which have a divine and therefore indefinite origin). The commentator distinguishes it from 'āptopadeśa' which is one of the three major instruments of valid knowledge by claiming that the authority in traditional lore is extra-terrestrial (alaukika), while 'āptopadeśa' has human origin [See ĀPTOPADEŚA].

Traumatic diseases: Diseases caused by injury, external or internal, is described by the SS (sūtra, 24, 6) as 'saṁghāta-bala-pravṛtta'. They are adventitious (āgantavaḥ) or accidental; and are marked by a forceful pressure on a frail body (durbalasya balavad-vigrahāt). They are two-fold: (1) caused by blows delivered by swords, stick (śastra-kṛta); and (2) caused by the attack of wild beasts (vyālādi-kṛta). They are classed under 'ādhi-bhautika' type of diseases, caused by other living beings (NiS), that is caused by conflict with antagonists of superior strength. [See DISEASE].

U

Upakrama: Literally 'beginning', 'commencement', it signifies the initial practice or application of therapeutic treatment on the patient ('physicking'); it also means any treatment (chikitsā) that is usually prescribed as preparatory but which may also suffice. Six upakramas are recognized (CS, sūtra, 22,4): (1) laṅghana, effecting leanness, reduction of body bulk, resulting in lightness, (2) bṛmhaṇa (also called santarpaṇa), promoting growth or body bulk, opposite of the above; (3) snehana, lubrication for the pur-

pose of increasing fat or moisture; (4) rūk-ṣaṇa, promoting dryness or removal of fat or moisture, opposite of the foregoing; (5) svedana, encouraging sweating, diaphoresis, in order to dilate the channels of circulation and openings; and (6) stambhana, promoting contraction or constriction of bodily parts or vessels of supply, such as arterioles, lymph vessels, blood ducts.

All possible treatments are covered under the above six heads (iti śaṭ sarva-roḡānāṁ proktāḥ samyag-upakramāḥ, CS, ibid., 41). But the six treatments may occur in several combinations (laṅghana-svedana; bṛmhaṇa-snehana, CHKP), in accordance with diseases involving combinations of vitiated doshas. Even as the number of doshas does not exceed three, the number of treatments does not exceed six (ṣaṭ-tvam nātivartanti, ibid., 43).

Actually, however, the major upakramas are only two: laṅghana and bṛmhaṇa, the remaining four being included in the former. In fact, the well-known pañcha-karmas are actually treatments that can properly be called laṅghana, excepting probably the anuvāsana-vasti, which is sometimes described as bṛmhaṇa treatment (CHKP on CS, sūtra, 22, 18; anuvāsanam varjayitvā). [See LANGHANA, BṚMHAṆA, PAÑCHA-KARMA].

Upamāna: Regarded as one of the instruments of valid knowledge (pramāṇa), upamāna is analogical reasoning, involving comparison. It is generally listed after anumāna (inference), and before śabda (verbal testimony). While the Nyāya school considers it as an independent instrument of valid knowledge, the Vaiśeṣika writers include it under verbal testimony (for example, PRAŚASTAPADA: upamānam āpta vachanam eva); and the Buddhist logicians class it either under observation or under verbal testimony (for example, DIG-NĀGA: na pratyakṣhād vākyaḥ vā vyatirichyate). Vāchaspati, as the spokesman of

the Nyāya viewpoint, argues that this is a distinct and independent instrument of valid knowledge, for it produces a kind of right knowledge (*pramā*) which is very different from those produced by other instruments.

The frequent example given of this instrument of valid knowledge is that of a townsman recognising a rare wild animal called *gavaya* (a bison, *Bos gaurus*) in the forest (an animal which he had not seen earlier), only on the basis of what a forester had told him, which was that the wild animal called *gavaya* resembles a cow but is not really a cow. The knowledge of the bison that he obtained is based on his own knowledge of the cow (to which the bison bears a resemblance) and on the testimony of the forester (that the bison resembles a cow). The operative factor here is 'perceived resemblance', a relation that obtains between the 'designation' (*saṁjñā*, namely, the resemblance to the cow, "go-sadṛśa-viśiṣṭo' yam") and the thing that is so designated (*saṁjñī*, viz, *gavaya*). The knowledge that arises out of this relation between a verbal description (*pada*, *vāchaka*) and the corresponding object (*artha*, *vāchya*) is described as reasoning by analogy (*saṁjñā-saṁjñī-sambandha-jñānam upamitiḥ*). The relation (*sambandha*) has an evocative power (*śakti*), involving the recollection of the verbal description given by the forester at some other time (*atideśa-vākyārtha-smaraṇa*).

Knowledge obtained by analogical reasoning is of three varieties. (1) Knowledge of the new object qualified by perceived resemblance to a known object, as in the case of the recognition of *gavaya*, mentioned above (*sādrśya-viśiṣṭa piṇḍa-jñāna*); (2) Knowledge of the new object on the basis of the description of an uncommon quality, as in the case of perceiving the rhinoceros on the basis of what one has been told about it, namely, that it has a single horn on its snout (*asādhāraṇa-dharma-viśiṣṭa-piṇḍa-jñāna*); and (3) Knowledge of an object based on its

possession of contrary characteristics (*vaidharmya-viśiṣṭa-piṇḍa-jñāna*) as in the case of knowing a camel on the basis of the description that it is different from a horse as regards its back and neck.

The CS (*vimāna*, 8, 42) is acquainted with this instrument of valid knowledge as *upamāya*. The definition given there emphasizes 'revelation' (*prakāśanam*) of an object not known or not so well known, on the basis of its resemblance to an object known or well-known.⁷⁰

The examples given indicate that the disease known as *daṇḍaka* (the disease characterized by the rigidity of the muscles) reminds one of the ramrod stick (*daṇḍa*), and that the disease known as *dhanus-stambha* (tetanus) bears marked resemblance to a bow (*dhanus*). The diseases have acquired the nomenclatures owing to the similarity that the physical symptoms bear with the familiar objects. The commentator notes that the student of medicine learns from his master (*āptāt śrutavān*) that if the disorder mentioned above resembles the object noted (for example, the potter's stick), then the disease is to be identified as such and such.

There is a third example given: the good physician being likened to a clever archer (*ishvāsena ārogyadasya*). The archer who shoots at a mark which is not far removed will not go wrong; even so a physician treating a patient after ascertaining the causes of the disease will not err. The two examples given earlier have a diagnostic import, while the third is general in its significance.

SS (*sūtra*, 1, 15) also mentions this instrument of valid knowledge (*upamāna*), but does not elaborate. The commentator, however, explains that it is the means whereby the subtle, specific, and distant object is cognized on the basis of well-known similarity. He also cites a few examples of symptoms in diseases bearing similarity to well-known articles of food like bean (*māsha*, *sesamum*, and *tila*), a tuber (*vidāri-kanda*) and nutmeg

(śāṭūka).

VĀTSYĀYANA (on Nyaya-sutra 1,1,6) mentions that analogical reasoning helps identification and collection of herbs by physicians. [See PRAMĀNA, UPAMĀNA].

Upaśaya: This is the fourth stage in the history of the present illness, the first three being, primary or precipitating cause (nidāna), premonitory symptoms or early manifestations (pūrva-rūpa) and manifest signs and symptoms (rūpa) [See NIDĀNA, PŪRVA-RŪPA, RŪPA, SYMPTOM]. The use of the word 'upaśaya' in this context is confusing, for the Sanskrit word strictly means lying near, being close at hand, ambush, lair (from 'upa', 'śete'). It has come to acquire the rather strained meaning of homologation, amelioration, or exploratory therapy in the medical texts.

The expression and this medical connotation are as old as the CS, where it is described as the drugs, diet and conduct that bring about happiness either by operating contrary to the cause of the disease or to the disease itself, or by producing such contrary effect (nidāna, 1, 10).

The commentator does not explain how the expression upaśaya could justify the above definition. And the expression has been used synonymously with sātmya (adaptability, homologation, in *AHr*, nidāna, 1) and in *MN* (1, 9 vidyād upaśayam vyādheh sā hi sātmyam iti smṛtah) (cf. also *CS*, vimāna, sātmyārtho hy upaśayārthah), which extends the scope even of the above definition. The concept of sātmya involves the drug, diet or conduct, which owing to habitual use develops adaptability, and loses the initial stress value. Contrarily, asātmya would be the case where the drug, diet or conduct produces stress, and continues to cause distress. If upaśaya is regarded as synonymous with sātmya, it should refer to the drug, diet or conduct that would eliminate the stress and bring relief to the patient.

Probably, the employment of the adjective 'associated with, or causing happiness' (sukhānubandha) in the above definition means only this. The physician's prescription of a drug, diet, or conduct would be watched for its suitability to the patient or the patient's adaptability to it.

However, *CS* (vimāna, 4, 8) makes it clear that the concepts 'upaśaya' and 'anupaśaya' (aggravation, the opposite of upaśaya, same as asātmya according to *AHr* and *MN*) are valid only when diagnosis is difficult, the cause of the disease (the dosha) being hidden (gūḍha-lingam vyādhim upaśayanusayābhyām); and that the process that goes on here is inference (anumāna-jñeya, *ibid.*), for observation in such a case is precluded (cf. also *SS*, nidāna 4, 15). It is the instance of inference from effect to cause, by observing the effects of a drug, diet, or conduct (prescribed by the physician), the details of the disturbed dosha is ascertained.

The important involvement in the concept of upaśaya is the ability to provide relief to the patient (sukhānubandha, *CS*; sukhāvaha, *AHr*) on the part of some drug or diet, prescribed by the physician as an exploratory measure. Hence the definition: "upaśaya, is that which makes for happiness (viz. relief from the distressing symptoms) as a result of the intake of some drug" (aushadha-janitah sukhānubandha upaśayah, *MK* on *MN*, 1, 8-9). This specification is with a view to exclude from the scope of upaśaya the happiness that we have in normal life, which comes as a result of pleasurable sensations through cooling and fragrant applications, good and delicious food, sex and so on.

The expression 'anu-bandha' signifies the act of connecting or fastening. Sukhānubandha, therefore, does not mean immediate obtainment of happiness, but happiness that comes in due course, stays on, and is good for the patient. The relief from the symptoms that the patient obtains as a result of the medication is indicated in the

context of upasaya; and the aggravation of the symptoms in the context of anupaśaya. In fever caused by indigestion, eating of curds may cause immediate happiness, but in due course it will only aggravate the condition instead of giving relief. Thus it is not an upaśaya, but only anupaśaya.

The happiness in upaśaya is in terms of contrariness to cause of disease or to disease itself (sukhānubandho yo hetu-vyādhy-ādiviparītakah, statement ascribed to SUDĀN-TASENA, *MK*, *ibid.*).

There is still another definition of upasaya given in *MK* (*ibid.*): "Upaśaya is the cause of proper suppression of unhappiness that is due to the disease" (samyag-vyādhijaduh-khopaśama-hetur upaśayah). The expression, therefore, refers specifically to the relief or amelioration of present symptoms, and not to the elimination of distress in general. The medication administered here, or the diet prescribed, or the conduct recommended, is not final and therapeutic, but exploratory and diagnostic. When the symptoms are complex and the picture is confusing, this procedure enables the physician to know more definitely about the specific nature of the disease. In case of doubt whether it is rheumatism (āma-vāta), or arthritis (sandhi-vāta), if the treatment by unction (snehana also called fat therapy) aggravates the condition, then rheumatism is suggested; otherwise arthritis is indicated.

Upaśaya is three-fold in accordance with the antagonism (viparīta) of the prescribed drug, diet or regimen: (1) to the cause of disease (hetu), (2) to the disease itself (vyādhi), (3) to both the cause of the disease and the disease itself (*ubhaya*). Each of these groups is again three-fold in terms of (i) the drug (*aushadha*), (ii) diet (*āhāra*), and (iii) the regimen (*vihāra*).

In fever caused by cold, the administration of *Zingiber officinale* (*śuṇṭhi*), or any other drug which is hot in effect, is an illustration of upaśaya by medicine which is antagonistic to

the cause of disease. In fever caused by physical exertion and aggravation of vāta, taking meat soup (*rasaudana*) illustrates the 'upaśaya' by diet which is antagonistic. In the aggravation of kapha by sleep in daytime, keeping awake during night, illustrates the upaśaya by regimen which is antagonistic to the cause of disease.

In diarrhoea (*atisāra*), administration of drugs like *Cissampleos pareira* (*pātha*), which tend to bind the bowel, illustrates the 'upaśaya' by a drug which is antagonistic to the disease itself. In the same complaint, eating of articles like *Lens culinaris* (*masūra*) illustrates the 'upaśaya' by diet which is antagonistic to the disease itself (for *masūra* binds the bowels). In misperistalsis (*udāvarta*), putting downward pressure on the abdomen (*pravāhaṇa*) illustrates the 'upaśaya' by regimen which is antagonistic to the disease itself. According to Vāpya-chandra, the last category also includes incantation, wearing of amulets, offerings, expiations, fire-oblations, and attendance of leachers and elders.

Antagonistic to both causes and disease are drugs like the *daśamūla* ('ten roots') which alleviate both vāta as well as the oedema (*śoṭha*) caused by it; dietary articles like hot and antipyretic gruel in fever caused by cold; or like buttermilk in chronic diarrhoea (*grahāṇī*) caused by vāta and kapha; and regimen like night-watching (*rātrijāgaraṇa*, which causes roughness) in drowsiness caused by sleep during daytime (which is unctuous).

There are, likewise, prescriptions of drugs, dietary articles and regimen which are not antagonistic in nature, but which operate contrary to the cause of disease, disease itself, or both the cause of disease and the disease itself. These are called 'viparītār-thakāri', which are also nine in kind, as in the case of antagonistic upaśaya mentioned above.

Illustrations of the upaśaya which works

against the cause of disease are: (drugs) in oedema (śoṭha) caused by aggravation of pitta, application of hot ointment (ushnāūpanāha); (diet) in the same complaint, the articles of diet which are hot and produce burning sensation (vidāhi); (regimen) in mental illhealth (unmāda), caused by aggravation of vāta, shocking the patient (trauma).

Illustrations of the upaśaya which works against the disease itself are: (drugs) in vomiting (chhardi), the administration of Ranadia dumetaroum (madanaphala), which is also an emetic; (diet) in diarrhoea, drinking of milk is also an emetic; and (regimen) in vomiting, applying upward pressure on the abdomen (pravāhaṇa) which in fact causes vomiting.

Illustrations of the upaśaya which works against both the cause of disease and the disease itself are: (drugs) in burns caused by fire, hot applications (for example, ointments with Aquilaria agallocha or agaru); (diet) in alcoholic intoxication (madātyaya), the drinking of alcohol (madya-pāna); and (regimen) in gout (sammūḍha-vāta) caused by great exertion, exercise in the form of swimming (jala-pratāraṇa).

Thus there are altogether eighteen kinds of upaśaya (cf. *MK* on *MN* 1, 9; also *MN*, 1, 8, and 9; *AHr*, nidāna, 1, 6, and 7) [See *SĀTMYA ANUPAŚAYA*].

Urine Examination : The examination of urine (mūtra) is one of the eight modes of examination in Indian medicine, known as 'ashtaśthānaparikshā'. While the significance of urine for diagnostic ends was recognized even in the *CS* and *SS*, examination of urine was a late innovation in India. The earlier version of urine-examination was by the employment of the senseorgans (excluding the ear), as a part of the pañchen-driyaparikshā. The colour and the consistency of the sample of urine was observed by the naked eye; the temperature (warmth or

cold), unctuousness, and stickiness were ascertained by dipping a finger into the sample (by touch); the odours, normal or otherwise, were smelled.

The taste of the urine was recognized as a significant detail, and probably the early physician also tasted the urine. *SS* (sūtra, 10) clearly recommends the employment of the sense of taste in cases of urinary disorders (rasanendriyāvijnēya pramehādishu rasaviśeshah). But *CS* (vimāna, 4) equally clearly excludes the use of the tongue in clinical examination (anyatra rasaññānāt). The practice however was given up, and the taste of the urine was only inferred by watching if ants gather near the sample of urine, or flies swarm over it (in which case it is sweet), or if flies and insects move away from it (which would denote distaste, vairasya).

The examination of urine was also conducted by questioning the patient (praśna) regarding the colour of urine and frequency of urination. Normally, an adult is said to pass about four añjalis (an añjali is equal to twelve ounces, and thus it would amount to about 50 ounces or about 1000 ml) of urine every day. Being a waste-product, it was voided normally six times during twenty-four hours (shaṇ-mūtrī *CS*, śārira, 7, 20). Non-production of the normal quantity or excess of production was symptomatic of ailment. When kapha is aggravated in the body, urination increases; when pitta is aggravated, urination decreases; when, however, vāta is aggravated, urination is more if kapha also is involved, or less if pitta also is involved. If all three doshas are equally aggravated (samnipāta), urination is scanty, and is at long intervals. In fevers and urinary disorders, excessive urination has a bad prognosis (*BR*).

The standard method of urine-examination mentioned in *YR* was in vogue in India until recently and is current even today among Tibetan physicians. This method, however, is not to be found in texts earlier

than the fifteenth century, although YR ascribes it to Nāgārjuna (Nāgārjunenaiva kṛta-parīkshā). It is possible that it was adapted from the Yunāni system of medicine, or from the Siddha school in South India. However, the examination of urine by the present-day Āyurvedic physician is confined to interrogation (praśna).

The method detailed in YR (86-90) involves collecting the patient's urine early in the morning (particularly the last watch of the night) in a glass or earthenware bowl. The first portion of the discharge as well as the final portions are rejected, and only the middle portion is collected. A drop of sesame oil, taken by a blade of grass or stick, is allowed gently to fall on the surface of the urine collected, and the behaviour of the oil-drop is watched. If it spreads all around quickly, then the disease is easily curable; if it does not spread but stays where it is dropped, then the disease is curable but with considerable difficulty; if, on the other hand, the drop of oil sinks to the bottom, it indicates that the disease is altogether incurable.

The examination of urine is meant to give the physician an understanding of the condition of the three doshas. For instance, if vāta is aggravated in the body, urination will be meagre in quantity, but more frequent; the colour of the urine will either be light yellow or it will be colourless; it will be thin, slightly frothy, and cold to touch. If pitta is aggravated, urination will neither be meagre nor much in quantity, but will be more frequent; its colour will be deep yellow or reddish, it may even be dark brown at times; it will be thin, and warm to touch. If kapha is aggravated, urination will be much, although the frequency is lessened; it will be whitish or pale in colour, thick and greasy, and cold to touch. If two doshas are together aggravated, the characteristics will be mixed.

In the test mentioned above, the movement of the oil drop (gati) is taken to indicate the aggravation of the doshas. For instance,

if the drop floats on the surface like a raft, or assumes a snake-like form, it means that vāta has been aggravated. If the drop breaks into tiny bubbles, and assumes the shape of an umbrella or a ring, then the indication is that pitta has increased. If it stays where it is dropped and assumes the shape of a bead, pearl or a sieve, then the aggravation of kapha is indicated. If the drop sinks to the bottom instead of spreading, then all three doshas are said to be simultaneously aggravated (cf. BP, 1, 7 10 and Vaidya-sāra-samgraha, 1).

V

Valid Testimony : One of the means of valid knowledge, verbal testimony of a competent authority (āptopadeśa) is also recognized as a valuable tool in clinical examination. Words acquire validity when communicated by a person who has direct knowledge of the things in question, who is motivated by compassion (viz. desire to do good to the person to whom the words are communicated), and who intends communicating things exactly as he knows them (VĀTSYĀYANA ON Nyāya-sūtra, 2, 1, 68). Such words (as for instance, the prescriptions of physicians) are valuable for the lay folk who are otherwise unable to acquire knowledge about things requiring their effort (like maintaining and enhancing health, avoiding illness, or getting rid of an ailment). Correct knowledge is indispensable for effective effort, and proper effort is indispensable for the attainment of desirable results or the avoidance of undesirable results. In matters where correct knowledge cannot be acquired by observation or inference, one has necessarily to rely on the

testimony of experts.

Verbal testimony is in the philosophical systems known as 'śabda', which generally refers to Vedic authority in matters beyond ordinary ken. The expression āptopadeśa, on the other hand, includes matters which are not only within the scope of ordinary experience but can be verified. [See ĀPTA, ĀPTOPADEŚA].

Vamana-karma : Included in the well-known pañcha-karma treatment [See PAÑCHA-KARMA]. Vamana literally means vomiting (from the root 'vam', udgiri meaning vomiting, belching, eructation, ejecting, throwing out, expectoration); but in its technical sense it is more than relieving the stomach of its contents and clearing the air passages (especially in children): it is a method of throwing out the vitiated doshas (particularly kapha) through the mouth (CS, kalpa, 1, 4; dosha-haraṇam ūrdhvamārgam vamanasamjñakam). It is one of the techniques of cleansing the system (saṁśodhana).

Drugs (like Radia dumentorum or madanaphala, piper longum or pippali) which are emetic in character, and are also incompatible with the patient's constitution (asātmya), nauseating (bībhatsa) and foul-smelling (durgandha) and evil-looking (durdarśana) are administered so that the doshas (especially kapha) affecting stomach (āmāśaya) or chest (uras), but which have already been rendered mobile (prachalita) by oleation and sudation [See SNEHANA, SVEDANA], are thrown out in the vomitus.

In successful emesis treatment, first the saliva (praseka), then the drugs taken, and then the kapha, pitta and vāta in order are eliminated (SS, chikitsā, 33, 22; also CS, siddhi, 1, 15). It is important that the drug taken as an emetic is not digested (unlike in purgation) and it moves upwards pulling the vitiated dosha along with it. Care should also be taken that the patient is not made to vomit unless and until he experiences nausea.

There are three ways of ascertaining whether the emesis has properly been accomplished: (1) laiṅgiki or symptomatic: the patient experiences relief after he vomits, he feels light in the heart-region, in the head, in the sides of the chest, and in the upper cavities; (2) mānikī, based on the amount of vomitus (one *prastha*, equivalent to 2 *seers* or about 48 fluid ounces being regarded as low cleansing or hīna-śuddhi, two *prasthas* as moderate or madhyama, and four *prasthas* as best or uttama [See ANCIENT WEIGHTS AND MEASURES AND THEIR METRIC EQUIVALENT]); (3) vai-gikī, based on the number of felt urges to vomit (four urges being regarded as moderate and eight as best or pravara-vega, NiS on SS, chikitsā, 33, 8). A fourth one is added: (4) antikī, based on the final content of the vomitus; if pitta is eliminated at the end, (viz., after kapha, which comes after the drugs taken) it suggests successful treatment (CS, siddhi 1, 14, pittāntam ishtam vamanam).

The benefits of emesis include the elimination of the vitiated doshas, cleansing of the channels of circulation (sroto-viśuddhi), alertness of the sense-organs, lightness of heart, head and the sides of chest, clarity of mind, lightness in the body, feeling of weakness, emaciation and absence of pain in the body (CS, op.cit., 17-18).

Among the diseases that are treated by emesis are nasal diseases, skin diseases, acute fever, cold, cough, dyspnoea, goitre, elephantiasis, loss of appetite, epilepsy, mental disorders, nausea, oedema, enemia, diarrhoea, colic with constipation, heart diseases, disturbances due to poisoning, poor digestion, obstruction in the throat, urinary disorders, glandular enlargement, diabetes, and piles (cf. CS, op.cit., 9, SS, op.cit. 13-14). It is important that the physician ascertains that the disorder is caused principally by the aggravation of kapha before he prescribes emesis.

If the treatment is inadequately given,

there will be dribbling of saliva, feeling of clouding in the heart-region, heaviness of the body, itching, eruptions and fever. When only the medicine taken is thrown out, there will be clouding in the heart and in the channels. If, however, the treatment has been carried out in excess (when excess of kapha is thrown out), unconsciousness (fainting), pain in the heart-region and throat, thirst, stupor, vitiation of vāta, weakness, blood-stained or frothy vomitus, insomnia, darkness to the eyes, burning sensations, and haemorrhage may ensue (CS, op.cit., 16-17; SS, op.cit.).

Persons to whom emesis should not be administered include those who are very fat or exceedingly emaciated, very young or very old, thirsty, hungry, over-worked and exhausted; those who have fasted; those who suffer from fainting spells, headache, enlargement of spleen, vomiting, hernia, prolapse of uterus or rectum, wasting diseases, pain in the eye or ear, worms, abdominal disorders; and pregnant women (SS, chikitsā, 33, 13-14). [See PAÑCHA-KARMA].

Vanaspatya-sattva : A personality type of the petent characterized by traits distinguishing the vegetable kingdom (vanaspati), lowest in the scale of evolution of the forms of life: utter absence of intelligence; absolute inactivity; lack of discrimination; indifference to the surrounding; dull wit and sole interest in food. The type belongs to the tāmasic group of people who are generally dull, apathetic, ignorant, dejected and confused. [See PERSONALITY OF THE PATIENT]

Varuṇa-sattva : A personality type of the patient, characterized by traits distinguishing the mythical god of the waters, Varuna: love of water and things cold; tidiness and cleanliness; valour; fortitude; nobility; patience but show of emotions as occasion demands; friendliness and large-heartedness. The type belongs

to the Sāttvic group of people who are generally healthy, long-lived and happy. [See PERSONALITY OF THE PATIENT]

Vasti-karma : Included in the pancha-karma treatment (See PAÑCHA-KARMA), 'vasti' refers to different methods of administering enema or rectal injection of medicinal oils, ghee, animal fat or medicated liquids into the urinary bladder of the patient for the purpose of eliminating the vitiated vāta (CS, sūtra 35, 'vastir vāta-haraṇam'). The treatment is highly commended in the texts and was in great vogue in ancient and mediaeval India. It was not, in India, a merely eliminative treatment; it had nourishing properties (poshaka).

CS (siddhi, 1, 39) eulogizes that some people regard this as half of all treatment ('chikitsārdha'), and others hold that this is in fact all treatment ('sarvam chikitsam'), for it eradicates the vitiation of vāta, which is the primary cause of disease in all the three channels, all the vital parts of the body and all the organs. Among the diseases, the majority are caused by vāta (as many as 80, while pitta is responsible for 40, and kapha for 20). This is so because vāta as a dosha has among its function regulation (elimination and retention) of the by-products of body metabolism (e.g.: faeces, urine, bile etc). When once vāta is vitiated, the vitiation of the other doshas follow. Inasmuch as 'vasti' is directed towards the irregularities in vāta, and involves drugs of various kinds, its benefit on the body is multitudinous and wholesome. It is corrective as well curative; it cleanses the system (saṁsodhana), and also pacifies the doshas (saṁśamana). It is good for the young and old alike; it makes the obese reduce their fat, and the emaciated increase their weight; it strengthens the body, invigorates the system, prevents aging, and prolongs life. It is especially indicated in the treatment

for rejuvenation. Its action although primarily on the vitiation of vāta, is comprehensive (viz. also on the vitiations of pitta and kapha) (SS, chikitsā, 36, 3-4).

The word 'vasti' actually means urinary bladder (from the root 'vas', 'vasti mūtrādikam atra' or 'vaste ācchādayati mūtrāśaya-putam'), located in the region below the navel ('nābher adhobhāgah', *Amara-kōṣha*). *Saṣ* (II, 5,1) explains that enemata is called 'vasti' because the treatment makes use of bladders taken out of the animals (like goat, deer, pig, cow and buffalo) in giving enema ('vastibhir ādiyate'). The ancient practice was with the decoctions or medicated liquids, oils, ghee or animal fat, and fit a metallic nozzle to it, through which the enema was administered. The instrument employed in giving enema (vasti-yantra) consists of a metallic tube called 'netra' fixed to the bag or pocket made of skin or animal bladder called 'putaka', in which the unctuous material or decoction is placed. The 'netra' must be straight and long enough to reach the large intestine (pakvāśaya), not too short or too long, neither too thin or too stout, not crooked nor worn out. Likewise, the 'putaka' must be from the smooth and clean skin of an animal (deer, buffalo etc), devoid of muscle tissue and free from foul smell, uniform in shape (oval), having no holes and amenable to firm grip.

This treatment is normally given after the preliminary oleation (snehana) and sudation (svedana) have been administered. and it is usually the third in the series of main 'pañcha-karma' treatments (pradhāna-karma), coming after 'vamana' (vomiting therapy) and 'virechana' (purgation therapy). (See VAMANA, VIRECHANA, SVEDANA, SNEHANA). Sometimes, however, this treatment is administered even when no oleation has priorly been done, for the treatment in itself involves a kind of

oleation (especially sneha-vasti). Usually, a week must elapse after purgation before the enemata is administered.

Two kinds of enemata are recognized:- (1) 'anuvāsana' (oily enemata, also called, in SS, Sneha-vasti), and (2) 'nirūha' (decoction enemata, also called āsthāpana-vasti) (SS, op.cit,17). There are other classifications also. One of them has four-fold grouping: (1) 'śodhana-vasti' (enemata which cleanses the system by throwing out the vitiated doshas and malas); (2) 'lakhana-vasti' (enemata which helps reduce the excess of fat-tissue), (3) 'snehana-vasti' (enemata which produces oleation in the system), and (4) 'br̥mhaṇa-vasti' (enemata which increases the body constituents and thus nourishes the body). Another is three-fold: (1) 'utkleśana-vasti' (enemata which releases the dosha from its location, increases the bulk of the by-products of body metabolism and liquifies them for proper assimilation or elimination); (2) 'dosha-hara-vasti' (or 'śuddhi-kara-vasti') (enemata which corrects the vitiation of the doshas and thus cleanses the system, āśodhana-treatment); (3) 'śamana-vasti' (enemata which ameliorates or pacifies the aggravated doshas) (*AHr*, sutra, 19,61). *CS* (siddhi, 8,21) has a six-fold classification especially of nirūha-vasti:- (1) counteracting vāta (vātaghna); (2) contributing strength and complexion (bala-varṇa-kṛt), (3) causing oleation (snehanīya), (4) preparing faecal matter properly (śakṛt-kṛt), (5) eliminating worms (krimighna), and (6) rejuvenating (vṛshatva-kṛt).

(1) anuvāsana-vasti (sneha-) "oily enemata", is the treatment which makes use of a preparation containing fat (like oils, ghee and animal fat) which is given through enema and retained in the body for about nine hours (three 'yāmas') and then voided. The preparation may, however, be retained in the body for as long as 24 hours; if, it is still not voided,

it needs to be forced out through decoction-enemata (nirūha-vasti).

It is indicated in disorders where vāta alone is involved, when there is excessive appetite or excessive dryness, fatigue, and diarrhoea. It is not recommended in cases of skin-disease, diabetes, obesity, diseases of the gastro-intestinal tract, indigestion, loss of appetite, intestinal worms, diarrhoea, gout, elephantiasis, coryza, jaundice, splenic enlargement, thirst, fainting spells, cough and wasting diseases (CS, siddhi, 2, 17-18); SS, chikitsā, 35, 22, AHr, sūtra, 19, 7-8).

This treatment is to be given during daytime in the spring season, and during night in summer, rainy season and winter. About the dosage of the medicinal substances (with ghee or oil) given as enema, the best (uttama) dosage is said to be six palas (equivalent of 24 tolas, moderate (madhyama) three, and minimum two (NiS on SS, op.cit.).

A variety of the oily enemata is known as 'mātrā-vasti'. It is harmless and generally beneficial treatment which is suitable for young and old alike, and which may even be used daily or for a considerable length of time. It may be resorted to in any season, or at any time, and there are no restrictions regarding diet or behaviour. It promotes bodily strength, increases body weight (bṛhmaṇa), and eliminates the waste-products of body metabolism easily. It is especially recommended for those who are emaciated, who over-work, and who habitually walk long distances or carry heavy weight, who have suffered fracture of bones, or who are afflicted with diseases caused by vitiation of vāta (CS, siddhi 4, 25).

(2) Nirūha (or āsthāpana)-vasti', or 'decoction enemata', is especially commended in order to cleanse the vitiation of vata (śodhana), but it must be administered only after proper oleation is achieved by 'anuvasana' (śneha)-vasti (unless the body has already abundant

oleation as in elephantiasis, obesity or some skin diseases), for, otherwise, diseases caused by vitiation of vāta would aggravate.

This involves the rectal injection of decoctions (kvātha) of drugs, especially of the āmla-group, milk, honey, unctuous material, meat-juice, salt etc., so as to evacuate the vitiated dosha and to restore the body-tissues to normal function. But care must be taken to void the 'vasti' if it is not by itself expelled in a muhūrta (viz. 48 minutes). The order in which the expulsion takes place is faecal matter, pitta(bile) and finally kapha (mucous). The person given this enemata properly feels light and does not feel weak.

This enemata is indicated in nervous diseases, diseases of the gastro-intestinal tract, intermittent fever, fainting spells, abnormal thirst, urinary stones, facial paralysis, gout, dysuria, loss of appetite, pain in the abdomen, heart-diseases, constipation, loss of sensation in the sense-organs, abdominal tumour, headache, convulsions and amenorrhoea. However, the time of the year, place of residence, homologation of the patient, the condition of his digestion, his age, and physical strength, and his mental state are important considerations, as also the dosha which is to be corrected and the drugs that are to be selected for enemata (CS, sūtra, 15, 5).

This treatment is unsuited for patients who are debilitated, who suffer from indigestion, cough, hiccup, dyspnoea, piles, inflammatory condition of the anus, vomiting, diarrhoea, skin diseases, anaemia, diabetes, distention of the abdomen, intestinal obstruction etc. Nor is it indicated for persons who have consumed excessive fat, or have taken a purgative or have undergone errhine therapy (nasya-karma). It should also not be given for persons who are frightened, angered, hungry or thirsty.

As mentioned earlier, this vasti is classified into several types, utkleśana, dosha-hara and śamana, used one after

another in disorders due to moderate vitiation of pitta; lekhaṇa-vasti is a mild form of enemata, indicated when the vitiated dosha is located in the large intestine (pakvāśaya); bṛmhaṇa-vasti is nutritive in effect; picchila-vasti is employed as an emollient in irritation of the colon, in dysentery, haemorrhoids, colitis, prolapse of the rectum etc.

(3) Uttara-vasti, although an enemata, is not included in the 'pañcha-karma' group. Its benefit in more than ten diseases has been mentioned in *CS*(siddhi, 12). It is a method by which the medicated or pure oils or ghee or other unctuous solutions are injected into the orifice above the rectum ('uttarena mārgaṇa dīyate'), like the urethra (medhṛa or penis) or vaginal cavity (yonī) by a special kind of instrument (e.g.: pushpa-netra for insertion into the vaginal cavity).

It is said to be especially indicated in diseases pertaining to semen, urinary disorders (calculus, sand in urine, dysuria etc), pain in bladder, penis or groin.

Venesection (Phlebotomy): 'Sirā-vyadha' (or - vyadhana) meaning 'cutting or opening a vein' is a technique employed for blood-letting. (See BLOOD-LETTING). When the patient is not a child nor very old (viz. above seventy), not pregnant nor suffering from diseases like cough, asthma, vomiting of blood, diarrhoea, oedema, anaemia and ascites, venesection is indicated. It is a more severe form of blood-letting, when compared with the application of leeches (jalaauka), or the use of hollow calabash or gourd-appliances (alaba) or the cupping by cow-horn (śṛṅga). (See APPLICATION OF LEECHES). Its severity consists in the employment of sharp instruments (viz. lancets, kuṭhārika and yīhi-mukha) for the purpose of extraction of blood. Less severe than venesection is scarification (lekhaṇa or pracchana) (*SS*, sūtra, 14,26).

When the sharp instruments (śastra) are used for blood letting, they must be driven straight and quickly so as to make the incision straight (rju), narrow (asamkīrṇa), subtle (sūkshma, viz. thin and unextended), right in the middle of the vein selected for the purpose (samam), neither very deep nor very shallow (anavagāḍham anuttānam), so that the deeper layers of the flesh, vital parts (marma), veins (sirā), ligaments (snāyu) and joints (sandhi) are not injured (*SS*, op.cit., 27).

In case the flow of blood is not sufficient, the opening made by the lancet must be rubbed with a paste of lampblack, common salt, oil and powdered tabernaemontana coronaria (tagara). When the flow is adequate, the part of the body is moistened with lukewarm oil and common salt.

That the extraction of blood has been proper is indicated by the patient feeling light and cheerful, rid of pain in the affected part, and free from the disease; the flow of blood would also stop spontaneously. On the other hand, if excessive blood has been extracted, the patient feels distressed (owing to the excited vāta), and his appetite is impaired. He may also faint.

Care must be taken not to resort to venesection in the cold season or on a cloudy day (durdina), or when the patient is exposed to cold to wind, or when he has not eaten, for in these conditions blood will not flow freely (*SS*, op.cit., 28). Similarly, when the patient is intoxicated (mada), has swooned (mūrcchā), is fatigued (śramārta), is suffering from constipation of bowels accompanied by suppression of flatus and urine (vāta-viṇ-mūtra-saṅgī), is harassed by sleep (nidrābhi bhūta), or is scared (bhīta), blood will not flow freely (*ibid.*, 29).

If venesection is improperly conducted (viz. when the patient has not been properly prepared for the operation, when the

operation is conducted in a wrong season, or when the incision is injudicious), it may result in haemorrhage, violent headache, morbid thirst, burning sensation, cough, asthma, jaundice, blindness, ophthalmia, wastage of vitality, convulsions and paralysis (ibid., 31)

The surgeon's skill consists in the selection of the proper site for venesection. In diseases of head and eye, the veins of the forehead, nose or the external canthus is chosen. If the ear has been diseased, the veins of the ear; in diseases pertaining to the nose a point on the nose; in lunacy a vein in the chest, on external canthus or on the fore-head; in deep-seated abscesses veins on the sides and between the arm-pit and the nipple are selected (AE, vol II, Part II, chap.3, p.119). [See BLOOD-LETTING]

Viprakṛṣṭa-Nidāna: [See REMOTE CAUSES OF DISEASE]

Virechana-Karma: Included in the familiar 'pañcha-karma' treatment (See PAÑCHA-KARMA), 'virechana' (or 'rechana') literally means purgation, but is more than purgation of popular notion: it is actually the technique of cleansing the system (saṁsodhana) by throwing out the vitiated dosha, especially pitta, in the lower region of the body, viz. removing it from the stomach (āmāśaya) to the large intestines (pakvāśaya), and from there expelled through the anus (guda) (CS, kalpa,1,4, 'adhobhāgam virechana saṁjñakam', CHKP "gudena dosha-nirharaṇam").

Drugs (like *Balispermum montanum* or *danti*, *operculina turpethum* or *trivṛt*), which are purgative in action are administered to the patient, so that the dosha, already made mobile by prior treatments (purva-karma, like oleation and sudation) (See SNEHANA, SVEDANA) is thrown out. This treatment generally follows the

emesis-treatment (See VAMANA), given three days earlier; but it is not a rule. Sometimes, emesis is not indicated; but purgation as a therapy must necessarily come after oleation and sudation.

In successful purgation, the materials thrown out are in this order: urine, faecal matter, vitiated pitta (or bile), medicines administered, and finally vitiated kapha ('virechane mūtra-purīsha-pittaushadhakapha', SS, chikitsā, 33,22). It is important that the drugs taken must be digestible (unlike in emesis) and move downwards, taking along with them the impurities in the normally inaccessible parts of the body (like sweat-glands, stomach, lungs, kidney etc) and expelling them.

The alimentary canal (koshta) which plays the main role in this treatment is classified into three kinds: (1) 'mind' (mrdu), any mild laxative, even milk, will cause the desirable evacuation; (2) 'hard' (krūra), which is habitually constipated, and requires some drastic purgative; and (3) 'moderate' (madhyama), amenable to purgatives of moderate strength. The first of these is dominated by pitta, the second by vāta and kapha, and the third represents the balance of the three doshas (SS, op.cit.,20).

When this therapy is properly carried out, the mind will be calm and clear, the sense-organs will be efficient and alert, the body constituents will be normal and firm, there will be strength and the digestion will be good, the channels of circulation (srotes) will be clear, flatus will properly get eliminated (SS, op.cit.,26). The maximum number of urges (vega) is said to be 30, moderate 20, and minimum 10.

Improper purgation (ayoga or hīnayoga) is suggested by symptoms such as vomiting, feeling of heaviness, indigestion, burning sensation, sensation of a load in the heart-region and in the abdomen, loss of appetite, drowsiness, obstruction of flatus, itching

and retention of urine and faeces (*AHr*, sūtra, 18.38-39). Absence of these symptoms are regarded as indications of proper purgation (*ibid*, 'yoga vaiparītye').

Excessive purgation involves the successive elimination of faecal matter, pitta(bile), kapha and finally vāta (*ibid*, 40), and causes body-ache, thirst, exhaustion, numbness, fainting, tremors, sleep, prolapse of anus, pain, loss of vitality, mental disturbances etc.

The purgation treatment is indicated in diseases like piles, certain skin troubles, jaundice, chronic fever, vomiting, enlargement of spleen, abscess, cataract, constipation, diseases of the head, edema, burns, ulcers, asthma, epilepsy, sensation of burning in the chest, pain while passing stools etc.

It is contra-indicated for persons of delicate constitution, those who are very young or very old, or very stout, persons whose digestive powers are poor, who suffer from diarrhoea, heart diseases, spells of fainting, nausea, who have undergone evacuation-enemata (*nirūha-vasti*); who suffer from ulceration of rectum, distention of the abdomen, indigestion, fever of recent origin, bleeding in the lower parts of the body, nasal catarrh; who are alcoholics or excited or habitually unhappy. (*CS*, *siddhi*, 2, 13, and *SS*, *op.cit.* 28-29).

Vyabhichāri-Nidāna: [*See* ABORTIVE CAUSES OF DISEASE]

Y

Yaksha-Sattva: A personality type of the patient, characterized by traits

distinguishing the legendary class of sylvan spirits known for their caprice and cupidity (*yaksha*); indolence; generosity, fondness for food and drink; sexual indulgence; cheerful temperament; and foppishness. The type belongs to the rājasic group of people who are generally irascible in temper, and prone to many ailments. [*See* PERSONALITY OF THE PATIENT]

Yāmya-Sattva: A personality type of the patient, characterized by traits distinguishing the mythical god of death and ruler of destiny, viz. Yama; energy and invincibility; propriety and purity in thought and conduct; power and self-possession, freedom from fear, arrogance and anger; equanimity; equity; and favourable disposition to all alike. The type belongs to the Sāttvic group of people who are generally healthy, long-lived and happy. [*See* PERSONALITY OF THE PATIENT]

Yāpya: The expression refers to diseases which are incurable but not unmanageable. The sources of the disease in this case cannot be completely eliminated, but the patient may be relieved from the discomfort and distress that are normally occasioned by the disease, by following a regimen of diet and conduct ('*pathyasevayā*' *CS*, sūtra, 10, '*pathyābhyāsāt*', *AHr*, sūtra 1). This is possible because the life-span of the patient has not as yet drawn to its close ('*śeshatvād āyushah*', *CS*, sūtra, 10, 17). the patient survives only by the strength of the medicines and regimen ('*kriyā dhārayate tu yam*', *SS*, sūtra, 23, 10); and as soon as the medical treatment is withdrawn the patient dies ('*kriyāyām tu nivṛtyām sadya eva vinaśyati*', *SS*, *op.cit.*)

This class of diseases is distinguished from the other diseases which are either curable, easily or with difficulty (*sādhya*) or altogether incurable (*asādhya*). [*See* PROGNOSIS. DISEASES]

References

१. नक्तं दिनर्तुभुक्तांशा दोषप्रकोपस्य हेतवः । न ते चयदिकमपेक्षन्ते ।
२. हेमन्ते निचितः श्लेष्मा वसन्ते कफरोगकृत् ।
३. दुर्लभत्वात् व्याधिकरणासमर्थाः ।
- ४ चक्रस्तु प्रज्ञापराधे तस्यान्तर्भावमाह । मिथ्याज्ञानकृतब्रह्मवधादि जन्मनो अधर्मस्य प्रज्ञापराध एव मूलम् । बलाबलं तत्र न निरूप्यते । रोगकारणत्वेनाधर्मस्य सर्वदा सिद्धत्वादिति॥
- ५ तत्र यद्यपि दोषप्रकोपपूर्वकमेव व्याधिजननं तथापि दोषवद् व्याधावपि तस्य कारणत्वं इति बोधयति । तत्र न व्याधिहरमात्रं भेषजं प्रयोज्यं, किंतु उभय प्रत्यनीकम्॥
- ६ स एवोत्पादकव्यञ्जनभेदाच्चद्विधा-तत्रोत्पादको यथा हेमन्तजो मधुरसः कफस्य, व्यञ्जको यथा तस्यैव कफस्य व्यञ्जको वसन्ते सूर्यसन्तापः । इति भट्टारहरचन्द्रः॥
- ७ बाह्याभ्यन्तरभेदाच्च द्विविधः ।आभ्यन्तरा दोषा दूष्याश्च । तत्र दोषोऽपि प्रकुपितः प्राकृतादिभेदादनेकधा । प्राकृतो यथा वसन्ते श्लेष्मा, शरदि पित्तं, प्रावृषि वायुः । वैकृतस्तु वसन्ते पित्तं, वर्षासु कफ पित्तं वा, शरदि कफो वायुर्वा । अस्य प्रयोजनं सुसाध्यत्वादिति॥ (मा. नि.)
- ८ अनुबन्ध्यानुबन्धभेदाच्च द्विधा । अनुबन्ध्यः प्रधानं अनुबन्धोऽप्रधानम् ।अस्य प्रयोजनं संसर्गजे व्याधौ विशेषेण चिकित्सोऽनुबन्धविरोधेन॥ (म.नि.)
- ९ द्वे रोगानीके भवतः प्रभावभेदेन साध्यमसाध्यं च, बलभेदेन मृदु दारुणं च, अधिष्ठानभेदेन मनोऽधिष्ठानं शरीराधिष्ठानं च, निमित्तभेदेन स्वधातुवैषम्यनिमित्तं आगन्तुनिमित्तं च, आशयभेदेन आमाशयसमुत्तथं पक्वशयसमुत्तथं चेति । एवमेतत् प्रभावबलाधिष्ठाननिमित्ताशयभेदाद् द्वैधं सद्भेदप्रकृत्यन्तरेण । भिद्यमानमथवाऽपि सन्धीयमानं स्यादेकत्वं बहुत्वं वा । एकत्वं तावदेकमेव रोगनीकं दुःखसामान्यात्, बहुत्वं तु दशरोगानीकानि प्रभावादिभेदादिना भवन्ति । बहुत्वमपि संख्येयं स्यादसंख्येयं वा॥ (च. सं. विमान. ६, ३)
- १० कालबुद्धीन्द्रियार्थानां योगो मिथ्या न चाति च । द्वायाश्रयाणां व्याधीनां त्रिविधो हेतुसंग्रहः॥ (च.सं. सूत्र. १) इत्यसात्येन्द्रियार्थसंयोगः, प्रज्ञापराधः, परिणामश्चेति त्रयस्त्रिविधविकल्पाः । हेतवो विकाराणाम् ॥ (तत्रैव, ११)॥
- द्वयोस्तु खल्वगन्तु निजयोः प्रेरणं असात्येन्द्रियार्थसंयोगः प्रज्ञापराधः परिणामश्चेति॥ (तत्रैव, २०)॥ तत् (निदानं) त्रिविधं असात्येन्द्रियार्थसंयोगः प्रज्ञापराधः परिणामश्चेति॥ (तत्रैव, निदान. १, ३)॥
- ११ कर्म वाङ्मनःशरीरप्रवृत्तिः । तत्र वाङ्मनःशरीरातिप्रवृत्तिरतियोगः । सर्वशोऽवृत्तिरयोगः । सूचकानूताकालकलहप्रियाबद्धानुपचार परुषवचनादिवाङ् मिथ्याचारः । भयक्रोधशोकलोभमोहमानेष्वामिथ्यादर्शनादिर्मनसो मिथ्यायोगः । वेगधारणोदीरणविषमस्खलनगमन पतनाङ्गप्रणिधानाङ्गप्रदूषण प्रहारावमर्दन प्राणोपरोधसंक्लेशनादिः शारीरो मिथ्यायोगः । संग्रहेण चातियोगायोगवर्जं कर्मवाङ्मनःशरीरजं अहितं अनुपदिष्टं यत्तच्च मिथ्यायोगं विद्यात् ॥ इति त्रिविधविकल्पं त्रिविधमेव कर्म प्रज्ञापराध इति व्यवस्येत्॥ (च. सं., सूत्र ? ११ ३९)
- १२ शीतोष्णवर्षलक्षणाः पुनर्हेमन्तग्रीष्मवर्षाः संवत्सरः स कालः । तत्रातिमात्रस्वलक्षणः कालः कालातियोगः, हीनस्वलक्षणः कालायोगः, यथास्वलक्षण विपरीतलक्षणस्तु कालमिथ्यायोगः । कालः पुनः परिणाम उच्यते (च.सं., सूत्र, १, ११, ४९)
- १३ हेतुव्याधिविपर्यस्तविपर्यस्तार्थकारिणाम् । औषधात्रविहाराणां मुपयोगं सुखावहम्॥ विद्यादुपशयं व्याधेः स हि सात्यमिति स्मृतः । विपरीतोऽनुपशयो व्याध्यसात्याऽभिः संज्ञितः॥ (अ. ह., निदान. १, ६, ७)
- १४ आप्तः खलु साक्षात्कृतधर्मा यथादृष्टस्यार्थस्य चिख्यापयिशया प्रयुक्त उपदेष्टा॥
- १५ रजस्तमोभ्यां निर्मुक्तास्तपोज्ञानबलेन च । येषां त्रिकालं अमलं ज्ञानमव्याहतं सदा॥ आप्ताः शिष्टाः विबुद्धास्ते तेषां वाक्यमसंशयम् । सत्यं वक्ष्यन्ति ते कस्मादसत्यं नीरजस्तमाः॥
- १६ तत्र आप्तागमस्तावद्भेदः । यश्चान्योऽपि कश्चिद्भेदार्थादविपरीतः परीक्षकैः प्रणीतः शिष्टानुमतो लोकानुग्रह प्रवृत्तः शास्त्रवेदः स च आप्ता गमः॥
- १७ सिद्धिं सिद्धैः प्रमाणैस्तु हितं चात्र परत्र च । आगमः शास्त्रमाप्तानां आप्तास्तत्त्वार्थवेदिनः ॥

- १८ त्रिविधे त्वस्मिन् ज्ञानसमुदये पूर्वमाप्तोपदेशाज्ज्ञानम्, ततः प्रत्यक्षानुमानाभ्यां परीक्षोपपद्यते....तस्माद् द्विविधा परीक्षा ज्ञानवतां प्रत्यक्षानुमानं च । त्रिविधा वा सहेपदेशात् ॥ (टीका - आगमेन ये व्याधीनां हेत्वादिविशेषः प्रतिपादिताः तान् प्रत्यक्षानुमानाभ्यामुपलभ्यमानो व्याधिं निश्चिनोति । अनुपदेशवान् तानुपलभ्यमानोऽपि हेत्वादिविशेषान् अशिक्षित रत्नपरीक्षो यथा रत्नानां विशेषं पश्यन्नपि नावधारयति रत्नविशेषं तथा नावधारयति व्याधिविशेषमिति भावः ॥)
- १९ लोके च भूयानुपदेशाश्रयो व्यवहारः । लौकिकस्याप्युपदेष्टुः उपदेष्टव्यज्ञानेन परानुजिघृक्षयायथाभूतार्थं चिच्छापयिषयाच प्रामाण्यम् । तत् परिग्रहादाप्तोपदेशः प्रमाणमिति ॥
- २० तत्रेदमुपदिशन्ति बुद्धिमन्तः - रोगमेकैकं एवंप्रकोपणं एवंयोगिन् एवमुत्त्थायानं एवमात्मानं एवमधिष्ठानं एवंवेदनं एवंशब्दस्पर्शरूपरसगन्धं एवमुपद्रवं एवंवृद्धिस्थानक्षयसमन्वितं एवमुदकं एवंनामानं एवंयोगं विद्यात् ॥ तस्मिन्नियं प्रतीकारार्थां प्रवृत्तिरथवा निवृत्तिरिति उपदेशात् ज्ञायते ॥ (च.सं., विमान. ४, ६)
- २१ जलकर्षणबीजर्तुसंयोगात्सस्यसम्भवः । युक्तिः षड्धातुसंयोगात् गर्भाणां सम्भवस्तथा ॥ मध्यमन्थनमन्थानसंयोगादग्निसम्भवः । युक्तियुक्ता चतुष्पादसम्पदसम्पद्व्याधिनिर्बहिणी ॥ बुद्धिः पश्यति या भावान् बहुकारणयोगजान् । युक्तिस्त्रिकाला सा ज्ञेया त्रिवर्गः साध्यते यया ॥ (च.सं., सूत्र., ११, २३-२५)
- युक्तिश्चैषा - षड्धातुसमुदयाद् गर्भजन्म, कर्तृकरणसंयोगात् क्रिया, कृतस्य कर्मणः फलं नाकृतस्य, नाङ्कुरोत्पत्तिरबीजात् । कर्मसदृशं फलं, नान्यस्मादबीजादन्य स्योत्पत्तिः इति युक्तिः । । (तत्रैव, ११, ३२)
- २२ एवमित्युपदेशः, यथा न जागृयाद्वात्रौ दिवास्वप्नं च वर्जयेत् ।" इति । अनेन कारणेन इत्युपदेशः । यथोपदिश्यते मधुरेण श्लेष्माऽभिवर्धते इति । प्रकृतस्यातिक्रान्तेन साधनं प्रदेशः । यथा देवदत्तस्यानेन शल्यमुद्धृतं तस्माद्गृह्यदत्तस्याप्ययमेवोद्धरिष्यतीति । प्रकृतस्यानागतस्य साधनमतिदेशः । यथा अनेनास्य वायुरूर्ध्वमुत्तिष्ठते तेनोदावर्तः इति ॥ (सु. सं. उत्तरतन्त्र, ६५, ५-७)

- २३ अथातो वमनविरचन साध्योपद्रवचिकित्सितं व्याख्यास्यामः—दोषाः क्षीणाः बृंहयितव्याः, कुपिताः प्रशमयितव्याः, वृद्धा निर्हर्तव्याः, समाः परिपाल्या इति सिद्धान्तः ॥ (सु.सं., चिकित्सा., ३३, १-३).
- २४ हेतुलिङ्गौषधज्ञानं स्वस्थातुरपरायणम् । त्रिसूत्रं शाश्वतं पुण्यं बुबुधे यं पितामहः ॥
- २५ प्रत्यक्षं खलु यद्यत् स्वयमिन्द्रियैर्मनसा चोपलभ्यते । (च.सं., विमान., ४, ४) ॥ प्रत्यक्षं नाम यद्यदात्मना चेन्द्रियैश्च । स्वयमुपलभ्यते । (तत्रैव, ८, ३९) ॥
- २६ यत् किञ्चिदेवार्थस्य साक्षात्कारिज्ञानं तदेव प्रत्यक्षम् । यथा हि मनोऽक्षगतं अभ्रान्तं वस्तु प्रत्यक्षमुच्यते ॥
- २७ सर्वेषु पदार्थेषु चतुष्टयसन्निकर्षादितथं अव्यपदेश्यं यज्ज्ञानं तत्प्रत्यक्षं प्रमाणम् ॥ (प्रशस्तपादीयवैशेषिकसूत्रभाष्ये) ॥
- २८ आत्मेन्द्रियार्थसंनिकर्षाद्यन्निष्पद्यते ॥ (वैशेषिकसूत्रम्, ३, १, १५) ॥
- २९ आत्मेन्द्रियार्थसंनिकर्षात्सुखदुःखे ॥ (तत्रैव, ५, २, १५) ॥
- ३० आत्मेन्द्रियमनोऽर्थानां संनिकर्षात्प्रवर्तते । व्यक्ता तादात्मे या बुद्धिः प्रत्यक्ष सा निरुच्यते ॥ (च.सं., सूत्र., ११, २०)
- ३१ सतां च रूपाणां अतिसंनिकर्षादतिविप्रकर्षादावराणात् करणदौर्बल्यात् आत्मनोऽनवस्थानात् समानाभिहारात् अभिभावात् अतिसौक्ष्म्याच्च प्रत्यक्षानुपलब्धिः ॥ (सांख्यकारिका, ७)
- ३२ तत्र त्रयं शरीरदोषा वातपित्तश्लेष्माणः, ते शरीरं दूषयन्ति । द्वौ । पुनः सत्त्वदोषौ रजस्तमश्च, तौ सत्त्वं दूषयतः । ताभ्यां च सत्त्वशरीराभ्यां दुष्टाभ्यां विकृतिरुपजायते । नोपजायते चाप्रदुष्टाभ्याम् । । (च.सं., शारीर., ४, ३४) । ।
- ३३ सात्त्विकास्तु आनृशंसं संविभागरुचिता, तितिक्षा सत्यं धर्मं आस्तिक्यं ज्ञानं बुद्धिर्मेधा स्मृतिर्धृतिरनभिषङ्गश्च ॥ (सु.सं., १, १८) । । (आनृशंसं अक्रूर कर्मकारित्वं । संविभागरुचिता संविभज्य भोक्तृमभिलाषुकता । तितिक्षा क्षमा । सत्यं भूतहितं तथ्यं वचो वा । धर्मः कायवाङ्मनोभिः सुचरितम् । अस्ति धर्ममोक्षपरलोकादिकमिति बुद्ध्या चरतीत्यास्तिकः तद्भावः आस्तिक्यम् । ज्ञानं आत्मज्ञानम् । बुद्धिः तत्कालविषया । मेधा ग्रन्थावधारणशक्तिः । धृतिः मनसो निश्चयात्मिका

- बुद्धिः । फलनिरपेक्षया बुद्ध्या श्रेयःकर्मकरण
 अनभिषङ्गः । फलनिरपेक्षया बुद्ध्या श्रेयःकर्मकरण
 अनभिषङ्गः ।) (डल्हणाचार्यः)
- ३४ शुचिं सत्याभिसन्धं जितात्मानं संविभागिनं
 ज्ञानविज्ञानवचनप्रतिवचनसम्पन्नं स्मृतिमन्तं
 कामक्रोधलोभोहमानेष्टाहिर्षामिषपितं समं सर्वभूतेषु ब्राह्मं
 विद्यात् ॥ (च.सं., शारीर., ४, ३६)
 तपः सत्य दयाशौचदानशीलरतं समं ।
 ज्ञानविज्ञानसम्पन्नं ब्राह्मं विद्याजितेन्द्रियम् । ।
 (कश्यप सं., सूत्र., लक्षणाध्याये, २८)
 शौचमस्ति कथमभ्यासो वेदेषु गुरुपूजनम् ।
 प्रियातिथित्वमिज्या च ब्रह्मकायस्य लक्षणम् ॥
 (सु.सं., शारीर., ४, ५१)
- ३५ इज्याध्ययनव्रतहोमब्रह्मचर्यपरमतिथिव्रतमुपशान्तमदमान
 रागद्वेषमोहलोभरोषं
 प्रतिभावचनविज्ञानोपधारणशक्तिसम्पन्नं आर्षं विद्यात् ॥
 (च. सं., तत्रैव)
 शौचव्रतेज्याध्ययनब्रह्मचर्यदयापरम् ।
 जितमानमदक्रोधं वक्तारं चार्षमादिशेत् ।
 (क.सं., तत्रैव)
 जपव्रतब्रह्मचर्यहोमाध्ययनसेविनम् ।
 ज्ञानविज्ञानसम्पन्नं ऋषिसत्त्वं नरं विदुः ॥
 (क.सं., तत्रैव)
 जपव्रतब्रह्मचर्यहोमाध्ययनसेविनम् ।
 ज्ञानविज्ञानसम्पन्नं ऋषिसत्त्वं नरं विदुः ॥
 (सु.सं. । तत्रैव, ८७)
- ३६ ऐश्वर्यवन्तमादेयवाक्यं यज्वानं शूरमोजस्विनं
 तेजसोपेतमक्लिष्टकर्मणि दीर्घदर्शिनं धर्मार्थकामाभिरतं ऐन्द्रं
 विद्यात् ॥ (च.सं., तत्रैव)
 त्रिवर्गनित्यं विद्वांसं शूरमक्लिष्टकारिणम् ।
 प्राहुरैन्द्रं महाभागमधिष्ठातारामीश्वरम् ॥
 (का. सं. तत्रैव)
 माहात्म्यं शौर्यमाज्ञा च सततं शास्त्रबुद्धिता ।
 भृत्यानां भरणं चापि माहेन्द्रं कायलक्षणम् ॥
 सु.सं., तत्रैव, ८२)
- ३७ लोखास्थवृत्तं प्राप्तकारिणं असंप्रहार्यं उत्तथानवन्तं स्मृतिमन्तं
 ऐश्वर्यलम्बिनं व्यपगतरागेष्टद्विषमोहं याम्यं विद्यात् । ।
 (च.सं., तत्रैव) ॥
- त्यक्तदम्भभयक्रोधं प्राप्तकारिणमीश्वरम् ।
 समं मित्रे च शत्रौ च याम्यं वि । सुनिश्चयम् ॥
 प्राप्तकारी दृढोत्थानो निर्भयः स्मृतिमान् शुचिः ।
 रागमोहमदद्वेषै । । (च.सं. तत्रैव ८६)
 ३८ शूरं धीरं शुचिं अशुचिद्वेषिणं यज्वानमम्भोविहाररात
 अक्लिष्टकर्मणि स्थानकोपप्रसादं वारुणं विद्यात् ॥
 (च.सं. । तत्रैव)
 अशुचिविशुचिः शूरः शीघ्रकोपि प्रसादवान् ।
 पुण्यशीलो महाभागो वारुणो वरुणप्रियः ॥
 (का.सं. तत्रैव)
 शीतसेवा सहिष्णुत्वं पेङ्गल्यं परिकेशता ।
 प्रियवादित्वं इत्येतद्वारुणं कायलक्षणम् ॥
 (सु.सं. । तत्रैव, ८३)
- ३९ स्थानमानोपभोगपरिवारसम्पन्नं सुखविहारं धर्मार्थकामनित्यं
 शुचिं व्यक्तकोपप्रसादं कौबेरं विद्यात् ॥ (च.सं., तत्रैव)
 स्थानमानपरिचारधर्मार्थकामलोभिनम् ।
 क्रोधप्रसादफलदं कौबेरं प्राहुरूर्जितम् ॥
 (का.सं., तत्रैव)
 मध्यस्थता सहिष्णुत्वं अर्थस्यागमनसञ्चयौ ।
 महाप्रसवशक्तित्वं कौबेरं कायलक्षणम् ॥
 (सु.सं., तत्रैव, ८४)
- ४० प्रियनृत्यवादित्रोल्लापकं श्लोकाख्यायिकेतिहासपुराणेषु
 कुशलं गन्धमाल्यानुलेपनवसनस्त्रीविहारनित्यं अनसूयकं
 गान्धर्वं विद्यात् ॥
 (च.सं., तत्रैव)
 श्लोकाख्यानेतिहासज्ञं गान्धमाल्याम्बरप्रियम् ।
 नृत्तगीतोपहासज्ञं गान्धर्वं सुभगं विदुः ॥
 (का.सं., तत्रैव)
 गन्धमाल्याप्रियत्वं च नृत्यवादित्रकमिता ।
 विहारशीलता चैव गान्धर्वं कायलक्षणम् ॥
 (सु.सं., तत्रैव, ८५)
- ४१ प्रजावन्तं क्रियावन्तं शीलं जगत्प्रियम् ।
 अनोर्थमशठं प्राज्ञः प्राजापत्यं वदेच्छुचिम् ॥
 (का.सं. तत्रैव)
- ४२ ये चान्येऽपि शुभा भावाः शुद्धसत्त्वे चापि सात्त्विकाः ।
 एतत्कल्याणभूयिष्ठं शुद्धं सत्त्वमिहाष्टधा । ।
 आरोग्यं प्रशमो रूपं ज्ञानविज्ञानमार्यता ।
 दीर्घमायुः सुखात्यक्तं सामान्यं शुद्धलक्षणम् ॥ (का.सं.,
 तत्रैव)

- ४३ राजसस्तु दुःखबहुलताऽनशीलताऽधृतिरङ्कारहङ्कार
आनुतिकत्व-अकारुण्य-दम्भो मानेनो ।
हर्षः कामः क्रोधश्च॥
(स.सं., तत्रैव)
- ४४ शूरं चण्डं अनसूयकं ऐश्वर्यवन्तं औपधिकं रौद्रं अनुक्रोशं
आत्मपूजकं आसुरं विद्यात्॥
(च.सं., तत्रैव)
ईश्वरोऽसूयकश्चण्ड आत्मपूजोपधिप्रियः ।
सानुक्रोशभयो रौद्रो हन्ता शूरस्त्वथाऽऽसुरः॥
(का.सं., तत्रैव)
ऐश्वर्यवन्तं रौद्रं च शूरं चण्डमसूयकम् ।
एकाशिनमौदरिकं आसुरं सत्त्वमीदृशम्॥
(सु.सं., तत्रैव, ८८)
(एकाशिनं एकाकी अश्नाति इति । औदरिकं छद्मपरम्)
- ४५ अमर्षिणमनुबन्धकोपं छिद्रप्रहारिणं क्रूरं आहारातिमात्ररुचिं
आमिषप्रियतमं स्वप्रायासबहुलं ईर्षुं राक्षसं विद्यात् ॥
(च.सं., तत्रैव)
- ४६ महालसं स्त्रेणं स्त्रीरहस्कामं अशुचिं शुचिद्वेषिणं भीरुं
भीषयितारं विकृतविहारशीलं पैशाचं विद्यात्॥
च.सं. तत्रैव)
शुचिद्विडशुचिः क्रूरोऽभीरुर्भीषयिताऽऽविलः ।
मद्यमांसप्रियः शङ्करी पैशाचो बहुभोजनः॥
(का.सं. तत्रैव)
उच्छिष्टाहारता तैक्ष्ण्यं साहसप्रियता तथा ।
स्त्रीलोलुपत्वं नैर्लज्जं पैशाचं कायलक्षणम्॥
(सु.सं., तत्रैव, ९२-९३)
- ४७ क्रुद्धं शूरमक्रुद्धभीरुं तीक्ष्णमायासबहुलं ।
संत्रस्तगोचरं आहारविहारसरं सर्पं विद्यात् ॥
(च.सं. तत्रैव)
तीक्ष्ण मायासबहुलं निद्रालुं बहुवैरिणं ।
अक्रुद्धभीरुं श्रेणं च सर्पं नित्यौष्ठलेहिनम् ॥
(का.सं. तत्रैव)
तीक्ष्णमायासिनं भीरुं चण्डं मायान्वितं तथा ।
विहारहारचपलं सर्पसत्त्वं विदुनराः ॥
(सु.सं. तत्रैव ८९)
- ४८ आहारकामं अतिदुःखशीलाचारोपचारं असूयकं
असंविभागिनं अतिलोलुपं अकर्मशीलं प्रेतं विद्यात्॥
(च.सं., तत्रैव)
अहंकृता महाहारा वैरिणो विकृताननाः ।
विरूपा विकृतात्मानो भूतसत्त्वा निशाप्रियाः॥
(का.सं. तत्रैव)
असंविभागमलसं दुःखशीलं असूयकम् ।
लौलुपं चाप्यदातारं प्रेतसत्त्वं विदुर्नतरम्॥
(सु.सं. तत्रैव, ९३-९४)
- ४९ अनुषक्तकाममजस्त्रं आहारविहारपरं अनवस्थितं अमर्षिणं
असञ्चयं शाकुनं विद्यात्॥
(च.सं., तत्रैव)
अमर्षि कुत्सिताहार वाग्द्यूनं नित्यशङ्कितम् ।
चलं दुर्मेधसं भीरुं शाकुनं विध्यनोकसम्॥ (का.सं.
तत्रैव)
प्रवृद्धकामसेवी चाप्यजस्त्राहार एव च ।
अमर्षणोऽनवस्थायी शाकुनं कायलक्षणम्॥
(सु.सं. तत्रैव, ९०)
- ५० दान शय्यात्यलङ्कारपानभोजनमैथुनः ।
नित्योपेतं प्रमुदितं याक्षं विद्यात् प्रभक्षणम्॥
(का.सं. तत्रैव)
- ५१ इत्येव खलु राजसस्य सत्त्वस्य षाड्विधं भेदांशं विद्यात्
रोषांशत्वात्॥
(च.सं., तत्रैव)
इत्येवं राजसं सत्त्वं सप्तधा क्रोधकारितम् ।
व्यामिश्रगुणदोषं च रज एवोपलक्षयेत्॥
(का.सं. तत्रैव)
षडेते राजसाः कायाः॥ (सु.सं. तत्रैव)
- ५२ तामसास्तु विषादित्वं नास्तिक्यमधर्मशीलता
बुद्धेर्निरोधोऽज्ञानं दुर्मेधस्त्वमकर्मशीलता निद्रालुत्वं चेति॥
(सु.सं. तत्रैव १८)
- ५३ निराकर्षिणुं अमेधसं जुगुप्सिताहाराचारं मैथुनपरं स्वप्रशीलं
पाशवं विद्यात्॥
(च.सं. तत्रैव)
आहारमैथुनपरं स्वप्रशीलममेधेधसम् ।
अथैनं पाशवं विद्यान्मृजाऽलङ्कारवर्जितम्॥
(का.सं. तत्रैव)

दुर्मेधस्त्वं मन्दता च स्वप्नैथुननित्यता ।
निराकरिष्णुता चैव विज्ञेयाः पाशवा गुणाः ॥
(सु. सं. तत्रैव ९५)

५४ भीरुमबुधं आहारलुब्धं अनवस्थितं अनुषक्तकामक्रोधं
सरणशीलं तोयकामं मात्स्यं विद्यात् ॥ (च. सं. तत्रैव)
भीरुमप्रज्ञमाद्यूनं कामक्रोधवशागतम् ।
हिंस्रमात्मपरं विद्यान्मात्स्यं सुप्रजसं शठम् ॥
(का. सं. तत्रैव)

अनवस्थिता मौर्ख्यं भीरुत्वं सलिलार्थिता ।
परस्पराभिर्मर्दश्च मत्स्यसत्त्वस्य लक्षणम् ॥
(सु. सं. तत्रैव ९६)

५५ अलसं केवलमाभिनिविष्टमाहारे सर्वबुद्ध्या हीनं वानस्पत्यं
विद्यात् ॥
च. सं. तत्रैव)

वधबन्धपरिक्लेशशीतवातातपक्षमम् ।
बुद्ध्याङ्गहीनमलसं वानस्पत्यं वदेद्दृजम् ॥
(का. सं. तत्रैव)

एकस्थानरतिर्नित्यमाहारे केवले नरे ।
वानस्पत्यो नरः सत्त्वकायार्थवर्जितः ॥
(सु. सं. तत्रैव, ९७)

५६ इत्येवं खलु तामसस्य सत्त्वस्य त्रिविधं भेदांशं
विद्यान्मोहांशत्वात् ॥
(च. सं. तत्रैव)

इत्येते त्रिविधं सत्त्वं तामसं मोहसम्भवम् ।
यच्चाप्येध्यकल्याणं सर्वं तच्चापि तामसम् ॥
(का. सं. तत्रैव)

इत्येते त्रिविधा काया प्रोक्ता तामसास्तथा ॥
(सु. सं. तत्रैव)

५७ अर्थापत्तिरिति दृष्टः श्रुतोऽर्थः अन्यथा नोपपद्यते
इत्यर्थकल्पना । (प्रशस्तपादीयभाष्ये)
अभिद्यमनोरथः योऽन्योऽर्थः प्रसज्यते ॥
(वात्स्यायन भाष्ये)

५८ कार्योत्पादः कारणसत्तां न व्यभिचरति, अभावस्य हि
वाक्याद्भावः प्रत्यनीक इति ॥

५९ अर्थप्राप्तिर्नाम यत्रैकेनार्थेनोक्तेन अपरस्यार्थस्य अनुक्तस्यापि
सिद्धिः । यथा - नायं संतर्पणसाध्यो व्याधिः इत्युक्ते
भवत्यर्थप्राप्तिः अपतर्पणसाध्योऽयं इति । नानेन दिवा
भोक्तव्यं इत्युक्ते भवत्यर्थप्राप्तिः निशि भोक्तव्यमिति ॥
(च सं. तत्रैव)

यत्कीर्तितमर्थादापद्यते सोऽर्थापत्तिः यथौदनं भोक्ष्ये इत्युक्ते
अर्थापन्नं भवति नायं पिपासुर्यवगूमिति ॥
(सु. सं. तत्रैव)

६० तथाविधदोषदूष्यसंमूर्छनाविशेषो ज्वरादिरूपो व्याधिः
तत्कार्याश्चारुच्यादयः । किंच अरुच्यादय एव प्रत्येकशो
रूपाणि, तत्समुदायो व्याधिः । यतः समुदायिभ्योऽन्य एव
समुदायः ॥ (माधवनिदानव्याख्या मधुकोशे, १)

६१ यथा दुष्टेन दोषेण यथा चानुविसर्पता ।
निर्वृतिमयस्यासौ संप्राप्तिर्जातिरागतिः ॥ (माधवनिदाने, १,
१०)

(दोषेति कर्तव्यतोपलक्षितं व्याधिजन्म संप्राप्तिः इत्येवं
लक्षणम् ॥ मधुकोशे)

६२ बलकालविशेषः पुनर्व्याधीनां
ऋत्वहोरात्राहारकालविधिनियमो भवति ॥

(च. सं. निदान., १, १२) (इह च संप्रप्रेरेव विशेषाः
संख्यादिकृता उक्ताः, न तु निदानादीनां विशेषाः ॥
चक्रपाणिव्याख्यायां)

६३ संख्याभेदेन व्याधेर्दोषभेदो ज्ञायते, यतो ज्वरादिकं स्वरूपतो
ज्ञात्वा चिकित्सार्थं विशेषो जिज्ञास्यः, कतमोऽयं ज्वरः इति ।
तस्मिन् ज्ञाते विशेषो भवतीति परंपरया कारणत्वं
संख्यायाः । । अत्रैव विधिर्हि प्रकारः स च भिन्नेषु न
युक्तः । अतः संख्यादिभिन्नेषु व्याधिषु कारणधर्मानुगतः
प्रकारो युज्यते । तथा च न्यायविदो ब्रुवते - समानेन धर्मेण
परिग्रहो भेदानां यत्र क्रियते स विधिः, संख्या तु भेदमात्रम्
इति ॥ (माधवनिदान व्याख्यामधुकोशे, १, १३)

६४ दोषाणां समवेतानां विकल्पोऽंशांशकल्पना ।
स्वातन्त्र्याभ्यां व्याधेः प्राधान्यमादिशेत् ॥
(अ. ह., निदान., १, १०)

६५ हेत्वादिकात्सर्वोपयवैर्बलाबलविशेषणम् ।
नक्तंदिनर्तुभुक्तांशैर्व्याधिकालो यथामलम् ॥
(अ. ह. निदान, १, ११)

६६ तथाविधदोषदूष्यसंमूर्छनाविशेषो ज्वरादिरूपो व्याधिः,
तत्कार्याश्चारुच्यादयः । किंच अरुच्यादय एव प्रत्येकशो
रूपाणि, तत्समुदायो व्याधिः । ...दुःखयतीति दुःखमिति
व्युत्पत्त्या दुःखहेतोर्धातुवैषम्यादेः व्याधित्वस्वीकारात् ।
अरुच्यादयस्तु स्वरूपेण विकारा एव । यदा तानि
अन्यप्रतिपादकाः, तदा लिङ्गान्यैवोच्यन्ते यदाह चरकः
(निदान. ८) —

ज्ञानार्थं यानि चोक्तानि व्याधिलिङ्गानि संग्रहे ।

व्याधयस्ते तदात्वे तु लिङ्गानीष्टानि नामयाः॥

(माधवनिदानं व्याख्यामधुकोशे, १, ७)

६७. पूर्वरूपं भवेल्लिङ्गं भाविव्याधिप्रबोधकम् ।

सामान्यं च विशिष्टं च द्विधा तदपि कीर्तितम्॥

सामान्यं दोषकोपस्य विशेषं नावबोधयेत् ।

विशेषं बोधयेद्यत्तद्विशिष्टं पूर्वलक्षणम्॥

उत्पन्नव्याधिलिङ्गानि रूपमाहुर्मनीषिणः ।

प्रधानं व्याधिवोधाय ज्ञाननिश्चयदं हि तत्॥

(सिद्धान्तनिदानं, १, ४-६)

६८. ऐतिह्यं नामाप्तोपदेशो वेदादिः । । (चं. सं., विमान., ८, ४१)॥ अलौकिकाप्तोपदेशः ऐतिह्यपदेनोच्यते॥

(टीकायां चक्रपाणिः)

६९. प्रत्यक्षादिभ्यः प्रमाणान्तरं उपमानं
तज्ज्ञान्यप्रमाविलक्षणप्रमाणजनकत्वम्॥

७०. औपम्यं नाम यदन्येनान्यस्य सादृश्यं अधिकृत्य प्रकाशनम्॥

७१. प्रत्यक्षागमानुमोपमानैरविरुद्धं...॥ (प्रसिद्धसाधर्म्यात्
सूक्ष्मव्यवहितविप्रकृष्टार्थस्य साधनं उपमानम् । यथा
माषवन्मषकः, तिलमात्रास्तिलकालकः, विदारीकन्दवत्
विदारारोगः, शालूकवत् पनसिकेति ॥ डल्हणाचार्य
टीकायाम्)

७२. यथा मुग्दः तथा मुग्दपर्णी, यथा माषः तथा माषपर्णी
इत्युपमाने प्रयुक्ते उपमानात् संज्ञासंज्ञिसम्बन्धं प्रतिपद्यमानः
तमोषधिं भैषज्याय आहरति॥ (वात्स्यायन न्यायभाष्ये, १,
१, ६)

७३. उपशयः पुनः हेतुव्याधिविपरीतानां विपरीतार्थकारिणां च
औषधाहारविहाराणां उपयोगः सुखानुबन्धः ॥ (चं. सं.,
निदान., १, १०)

७४. हेतुव्याधिविपर्यस्तविपर्यस्तार्थकारिणाम् ।
औषधान्नविहाराणां उपयोगं सुखावहम्॥
विद्यादुपशयं व्याधेः स हि सात्म्यमिति स्मृतः ।
विपरीतोऽनुपशयो व्याधसात्त्याऽभिसंज्ञितः॥
(माधवनिदानं, १, ८-९)

७५. वातेन पाण्डुरं मूत्रं रक्तं नीलं च पित्ततः ।
रक्तमेव भवेद्रक्ताद्धवलं फेनिलं कफात्॥
(भावप्रकाशे, १, ७, १०)
वाते तु पाण्डुरं मूत्रं सफेनं कफरोगिणाम् ।
रक्तवर्णं भवेत् पित्ते द्वन्द्वजे मिश्रितं भवेत् ।
एवं मूत्रं परीक्ष्यैव कुयद्विद्यश्चिकित्सितम्॥
(वैद्यसारसंग्रहे)

Appendices

Select Source-material

I. Excerpts from ŚARŅGADHARA-SAMHITA (SaS, I, 3, 1-8)

1.

करस्याङ्गुष्ठमूले या धमनी जीवसाक्षिणी ।
तत्चेष्टया सुखं दुःखं ज्ञेयं कायस्य पण्डितैः ॥ १ ॥

At the source of the right hand (for men) is the pulse that is witness to the vital functions (in the body). By its articulations, the wise physicians will be able to ascertain health (sukham, literally happiness) and ill-health (duhkham, unhappiness) of the patient.

2-3.

नाडी धत्ते मरुत्कोपे जलौकासर्पयोगतिम् ।
कलिङ्गकाक मण्डूकगतिं पित्तप्रकोपतः ॥ २ ॥
हंसपारावतगतिं धत्ते श्लोष्मप्रकोपतः ।
लावतित्तिरिवर्तीनां गमनं सन्निपाततः ॥ ३ ॥

When vāta is aggravated, the pulse articulates like a leech or a snake; when pitta is aggravated, the pulse articulates like a sparrow, a crow or a frog; when kapha (śleshma) is aggravated, the articulation of the pulse resembles the gait of a swan or a pigeon; and when all three doshas are together aggravated, the articulation of the pulse will not be uniform but will resemble the movement of a quail, a partridge, or another bird of the quail family known as 'varti' (i.e. the movements are mixed, slow and jumpy).

4.

कदाचिन्मन्दगमना कदाचिद्वेगवाहिनी ।
द्विदोषकोपतो ज्ञेया हन्ति च स्थानविच्युता ॥ ४ ॥

When two doshas (vāta-kapha or

pitta-kapha) are aggravated, the articulation of the pulse is sometimes slow and sometimes fast. If the pulse strays from its appropriate positions (with regard to the three doshas), it forebodes death.

5.

स्थित्वा स्थित्वा चलति या सा स्मृता प्राणनाशिनी
अतिक्षीणा च शीता च जीवितं हन्त्यसंशयम् ॥

If the pulse (keeping to the appropriate position) articulates, frequently halting (with recurrent intermissions), it (also) forebodes death. Likewise, the pulse that is exceedingly feeble and cold is doubtless the indication of imminent death.

6.

ज्वरप्रकोपे धमनी सोष्णा वेगवती भवेत् ।
कामक्रोधाद्वेगवहा क्षीणा चिन्तामयप्लुता ॥ ६ ॥

The pulse is warm and rapid in fever, rapid in lust or in anger, and feeble in worry or fear.

7.

मन्दाग्निःक्षीणघातोश्च नाडी मन्दतरा भवेत् ।
असृक्पूणा भवेत्कोष्णा गुर्वे सामा गरीयसी ॥ ७ ॥

The pulse is sluggish in poor digestion and in diminished vitality; slightly warm, and heavy (taut) when blood is in excess; in improper digestion (sāma), the pulse is even more heavy (taut).

8.

लघ्वी वहति दीप्ता भिस्तथा वेगवती मता ।
सुखितस्य स्थिरा ज्ञेया तथा बलवती मता ॥ ८ ॥

When the power of digestion is intense, the pulse is slight and rapid; when the person is happy (free from any discomfort or ailment), the pulse is steady and powerful.

9

चपला क्षुधितस्यापि तृप्तस्य वहति स्थिरा॥ ९ ॥

When the person is hungry, the pulse is fickle, but when he is satiated, it is steady.

II. Excerpts from BHĀVA-PRAKĀSA

Pūrva-khaṇḍa Second Part, 7, 11-22

The section known as 'Rogi-parīkṣhā-prakaraṇam' (included the larger Paribhāṣādi-prākaraṇam) commences with an enumeration of three-fold clinical examination: observation (darśana), palpation (sparsana) and interrogation (praśna). Observation includes pulse-examination, besides apprehension of warmth, cold, hardness etc. Interrogation elicits information about the feeling of lightness or heaviness of stomach, thirst, hunger, strength, weakness (v. 1-2). The pulse is elsewhere (ibid., 6, 46) described as that in which the vital current flows and as one which characterizes the individualized life or jiva. Pulse examination is dealt with in verses 11 to 22 in 7th Section of Pūrva-khaṇḍa.

11.

पुंसो दक्षिणहस्तस्य स्त्रियो वामकरस्य तु ।
अंगुष्ठमूलगां नाडीं परीक्षेत भिषग्वरः॥ ११ ॥

The wise physician will examine the pulse at the source of the thumb in the right hand of the male patient and in the left hand of the female patient.

12.

अंगुलीभिस्तु तिसृभिर्नाडीमवहितः स्पृशेत् ।
तच्चेष्टया सुखं दुःखं जानीयात्कुशलोऽखिलम्॥ १२ ॥

The clever physician must feel the pulse with three of his fingers, with great attention; and he will understand everything about the

health (sukham, literally happiness) and ill-health (duhkham, unhappiness) by (studying) the articulation of the pulse.

13.

सद्यःस्नातस्य सुप्तस्य क्षुतृष्णातपशालिनः ।
व्यायामश्रान्तदेहस्य सम्यङ्नाडी न बुध्यते॥ १३ ॥

The pulse will not correctly reveal (the condition of health), if the patient has just had his bath; if he is asleep; if he is stricken by hunger, thirst or sun; if he is tired after exercise.

14.

वातेऽधिके भवेन्नाडी प्रव्यक्ता तर्जनीतले ।
पित्ते व्यक्ता मध्यमाया तृतीयांगुलिका कफे॥ १४ ॥

In aggravation of vāta, the pulse is clearly felt immediately under the forefinger (tarjanī); in aggravation of pitta, the pulse appears under the middle-finger (madhyamā); and in aggravation of kapha, the pulse appears under the third-finger (tṛtīyāngulika, the ring-finger).

15.

तर्जनीमध्यमामध्ये वातपित्ताधिके स्फुटा ।
अनामिकायां तर्जन्यां व्यक्ता वातकफे भवेत्॥ १५ ॥

If the aggravation is of vāta and pitta together, the (patient's) pulse is clearly felt between the (physician's) forefinger and the middle finger: if vāta and kapha are aggravated together, then the pulse is visible to the middle-finger as well as to the ring-finger (anāmikā).

16.

मध्यमानामिकामध्ये स्फुटा पित्तकफेधिके ।
अंगुलित्रितयेपि स्याव्यक्ता सन्निपाततः॥ १६ ॥

If pitta and kapha are together aggravated, the (patient's) pulse is felt inbetween the

(physician's) middle-finger and the ring-finger. If all three doshas are aggravated together, then the pulse is felt by all three fingers (of the physician).

17.

वाताद्वक्रगतिं धत्ते पित्तादुत्प्लुत्य गामिनी ।
कफान्मन्दगतिर्ज्ञेया सन्निपातादतिद्रुता ॥ १७ ॥

The pulse articulates crookedly in condition of the aggravation of vāta, in a jumpy manner when pitta is aggravated, sluggishly when kapha is aggravated, and excessively rapidly when all three doshas are together aggravated.

18.

वक्रमुत्प्लुत्य चलति धमनी वातपित्ततः ।
वहेद्वक्रं च मन्दं वातश्लेष्माधिकत्वात् ॥ १८ ॥

When vāta and pitta are together aggravated, the pulse articulates both crookedly and in a jumpy manner; when vāta and kapha are together aggravated, the pulse is both crooked and sluggish.

19.

उत्प्लुत्य मन्दं चलति नाडी पित्तकफेऽधिके ।
कामात्क्रोधाद्वेगवहा क्षीणा चिन्तामयप्लुता ॥ १९ ॥

When pitta and kapha are together aggravated, the articulation of the pulse is both jumpy and sluggish. In conditions of lust and anger, it is rapid; and it is feeble in worry and fear.

20.

स्थित्वा स्थित्वा चलेद्या सा हन्ति स्थानच्युता ।
अतिक्षीणा च शीता च प्राणान् हन्ति न संशयः ॥ २० ॥

If the pulse articulates haltingly, or if it abandons its normal position, then it forebodes death. So too, exceedingly feeble and cold pulse indicates imminent death.

21.

ज्वरकोपेन धमनी सोष्णा वेगवती भवेत् ।
मन्दग्निः क्षीणधातोश्च सैव मन्दतरा मता ॥ २१ ॥

In fever, the pulse is warm and articulates rapidly. In poor digestion and loss of vitality, its articulation is sluggish.

22.

चपला क्षुधितस्य स्यात् तृप्तस्य भवति स्थिरा ।
सुखिनोपि स्थिरा ज्ञेया तथा बलवती मता ॥ २२ ॥

If the person is hungry, his pulse is fickle, but when he has eaten well, the pulse becomes steady. If the person is in comfort the pulse is both firm and powerful.

III. Excerpts from BASAVARAJIYAM

The Section I, (verses 33-36) deals with the 'eight-fold dhātu', by which is meant the group of arteries or pulse in the feet 2, in hands 2, in the neck 2, and in the nose 2. The arteries in the feet are located in the area covering three inches below the ankle; those in the hands are located in the forearm in the area covering three inches below the wrist.

38.

जीवितं लाघवं स्वास्थ्यं ज्वरस्य च विमोचनम् ।
यत्तु स्थानान्न मुच्येत पादनाडीं निदर्शयेत् ॥ ३८ ॥

The pulse at the feet reveals the length of life, the agility of the body, health, and the removal of fever.

39.

सव्येन रोगधृतिकूर्परभागमध्यं
पीड्याथ दक्षिणकराङ्गुलिकात्रयेण
अङ्गुष्ठमूलमधिपश्चिमभागमध्ये
नाडीप्रभञ्जनगतिं सततं परीक्षेत् ॥ ३९ ॥

The physician must press with three fingers of

his right hand the wrist of the patient's right hand, and then feel the pulse therein (radial artery) right below the thumb on the palm side.

40-41.

नारीणामूर्ध्वमुखः कूर्मः पुंसां पुनरधोमुखः ।
अतः कूर्मव्यतिक्रान्तात् सर्वत्रैव व्यतिक्रमः॥ ४०॥
लक्ष्यते दक्षिणे पुंसां या च नाडीविचक्षणैः ।
कूर्मभेदेन वामानां वामे चैवावलोक्यते॥ ४१॥

The 'navel-tortoise' (nābhikūrma, a figurative expression for the organization of the main arteries at the navel centre) faces upward in women, and downward in men. Owing to this, the difference between the male and the female patients obtains. The experts in pulse-examination prescribe that the pulse of the male patient must be felt in his right hand, that of the female patient in her left hand.

42-43

तिर्यग्यवप्रमाणेन जहाति च निजं पदम् ।
सूचितं जीवनिर्माणं हस्तनाडी गले च या॥ ४२॥
अजीर्णमामदोषं च ज्वरस्यागमनं क्षुधाम् ।
वातपित्तकफान् दुष्टान् हस्तनाडी निदर्शयेत्॥ ४३॥

If the pulse in the hand or in the neck moves away from its normal position by the length of a barleycorn (yava, i.e. 1/6 or 1/8 of an angula). The pulse in the hand (radial artery) will reveal indigestion (ajīrna), the improper digestion (āma-dosha), onset of fever, hunger (as a disorder), and disorders of the three doshas (vāta, pitta and kapha).

44.

आगन्तुकज्वरं तृष्णामायासं मैथुनं क्लमं ।
भयं शोकं च कोपं च कण्ठनाडी निदर्शयेत्॥ ४४॥

The pulse in the neck reveals āgantuka-jvara, thirst, exertion (āyāsa), sexual indulgence, fatigue (klama), fear, sorrow and anger.

45.

मरणं जीवितं कामं नेत्ररोगं शिरोव्यथाम् ।
श्रावणान्मुखजान् रोगान् नासानाडी निदर्शयेत्॥ ४५॥

The pulse in the nose will reveal death life, desires, diseases of the eye, pain in the head, diseases of the ear and the mouth.

46.

सुव्यक्तता निर्मलत्वं स्वस्थानस्थितिरेव च ।
अचञ्चलममन्दत्वं सर्वासां लक्षणं शुभम्॥ ४६॥

The pulses in the all places must be deemed to forebode well, when they are very clear and undefiled by disorders, when they are in their appropriate positions, when they are not fickle, and when they are not sluggish.

47.

वातपित्तकफं चैव द्वद्वजं सान्निपातिकम् ।
साध्यासाध्यविवेकं सर्वं निदर्शयेत्॥ ४७॥

The pulse will reveal the diseases caused by (the disorders of) each of the three doshas (vāta, pitta and kapha), by two of them, and by three of them, and also the favourable or unfavourable prognosis.

48.

वाताद्वक्रगतिर्नाडी चपला पित्तावाहिनी ।
स्थिरा श्लेष्मवती ज्ञेया संसर्गान्मिश्रलक्षणम्॥ ४८॥

The pulse representing vāta will be crooked, the pulse representing pitta will be fickle, the pulse representing kapha will be motionless; and when the doshas are collectively disordered (samsarga), mixed characteristics (miśra-lakshana) are seen.

49.

वाताधिके वहेच्चाग्नेयन्ते श्लेष्माधिका वहेत् ।
मध्ये पित्ताधिका नाडी सन्निपाते विलक्षणम्॥ ४९॥

When vāta disorder is predominant, it is seen at the head of the pulse; when kapha disorder is predominant, it is seen at the bottom of the pulse; and when pitta disorder is predominant, it is seen in the middle. When, however, the three doshas are together disordered (sannipāta), the pulse is seen differently (vilakṣhaṇa).

50.

वाते वाताधिका नाडी व्यालीव कुटिला सदा ।
अत्यन्तदुष्टा वहति स्तब्धा तन्त्रीसमाकृतिः॥ ५०॥

When vāta is aggravated, the pulse articulates in a serpentine manner, and appears to be extremely vicious, and taut like a strig.

51.

पित्ताधिके तु चपला नाडी वहति काकवत् ।
बक दर्दुरसञ्चारा चटकावर्तिका गतिः॥ ५१॥

When pitta is aggravated, and pulse is fickle, and it appears to articulate like a crow, a crane, a frog, a sparrow or quail.

52.

कफेन दुष्टनाडी तु हंसकुक्कुटगामिनी ।
कपोतमन्दसञ्चारा वहतीति विनिश्चयः॥ ५२॥

When kapha is aggravated, the pulse sullied by it would articulate slowly like a swan, a cock, or a pigeon.

53.-54.

अग्रे वातवहा नाडी मध्ये वहति पित्तला ।
अन्ते श्लेष्मविकारेण नाडी ज्ञेया बुधैः सदा॥ ५३॥
वाताद्ध्रुगतिर्नाडी पित्तादुप्लुत्यगामिनी ।
कफान्मन्दगतिर्ज्ञेया सन्निपातादतिद्रुता॥ ५४॥

When vāta is aggravated, the pulse appears crooked or bent at the top, when pitta is aggravated the pulse appears to jump like a frog, right in the centre, and when

kapha is aggravated, the pulse articulates at the bottom sluggish. When the three doshas are together aggravated, the pulse appears to articulate very fast.

55.

मुहुःसपगतिं न मुहुर्भेकगतिं तथा ।
वातपित्तद्वयोद्भूतां प्रवदन्ति विचक्षणो॥ ५५॥

When vāta and pitta are together aggravated, the pulse articulates now like a snake and now like a frog, so the experts say.

56.

भुजगादिगतिं नाडीं राजहंसगतिं तथा ।
वातश्लेष्मसमुद्भूतां वदन्ति विनिश्चयम्॥ ५६॥

When vāta and kapha are together aggravated, the articulation of the pulse resembles the movement of a snake or the gait of a swan.

57.

मण्डूकादिगतिं नाडीं मयूरादिगतिं तथा ।
पित्तश्लेष्मसमुद्भूतां प्राहुर्वैद्यविशारदाः॥ ५७॥

When pitta and kapha are together aggravated, the pulse articulates like (jumping) frog or a (strutting) peacock, so the most learned among the physicians say.

58. [Same as 63 in the preceding excerpt]

59.

यात्युत्कटस्थिरात्यन्तं यात्येवं मन्दगामिनी ।
या च सूक्ष्मा च वक्रा च तामसाध्यां निर्दिशेत्॥ ५९॥

When the pulse is excessively firm, or articulates extremely slowly, or is imperceptibly subtle or crooked, it indicates that the disease is incurable.

60.

व्याकुला शिथिला मन्दा स्थित्वा स्थित्वा प्रयाति सा ।
स्थानं क्रमेण मुञ्चन्ती नाडी मरणशांसिनी॥ ६०॥

The pulse that is agitated or loose, that articulates, haltingly, or abandons the normal positions, forebodes death.

61.

अत्यन्तशीतला नासास्तैमित्यं नेत्रयोरपि ।
स्थानच्युतिश्च नाडीनां सद्यो मरणहेतवः॥ ६१॥

The patient whose nose is exceedingly cold to touch, whose eye-sight is settled (viz. without winking), and whose pulse strays from the normal position, will not survive long (viz. these are indications of imminent death).

62.

जहाति यस्य स्वस्थानं यवार्धमपि नाडिका ।
न स जीवितमाप्नोति त्रिदिनेनैव पञ्चताम्॥ ६२॥

If the pulse strays from its normal position even by half a yava (viz. barley-corn, length equal to 1/6 or 1/8 of an angula), the patient will die within three days.

63.

अजीर्णादुद्धवा नाडी कठिना पूरिता जडा ।
प्रसन्न स्फुटिता शुद्धा क्षुधानाडी प्रशस्यते॥ ६३॥

The pulse of a person suffering from indigestion is hard, full and inert. The pulse of one who is hungry is tranquil, clear and unsullied (by doshas).

64-65.

बालानामपि वृद्धानां मूकानामपि देहिनाम् ।
उन्मत्तानामभिन्यासविमूढमनसामपि॥ ६४॥
व्यस्तं समस्तं द्वन्द्वं च दोषारूपमशेषतः ।
दर्शयत्यचिरादेव नाडी द्रव्याणि दीपवत्॥ ६५॥

Even as a lamp lights up things, the pulse reveals everything about the disorders caused by the doshas, each severally, all three conjointly, and two at a time, even in

children, and in folk who may be dumb, insane or confused.

66.

प्रातः श्लेष्मगतिर्नाडी मध्याह्ने चातिपित्तला ।
अपरा वातिका ज्ञेया पुनाः पित्ता निशार्धके॥ ६५॥

In the forenoon the pulse articulates kapha (slēshma); around noon-time pitta; and in the evening vāta. At midnight, it articulates pitta again.

67.

स्पर्शनात् पीडनोद्भूताद्भेदनामर्दनादपि ।
तासु प्राणस्य सञ्चारं प्रयत्नेन विशोधयेत्॥ ६७॥

(The physician) must carefully, and with effort, ascertain the flow of the vital current in the pulse, by touching, pressing, elevating, separating, and rubbing (the area where the pulse is read).

68.

व्यायामतृष्णातपपीडितस्य बुभुक्षतो भुक्तवतो हि जन्तोः ।
अभ्यञ्जनस्नान वधूपभोगक्रियासु नाडी न विबोधनीया॥ ६८॥

The pulse-examination will not reveal (significant details) when the patient has exerted, is thirsty, is tormented by sun, is hungry, has just eaten, has just bathed, or has had an oil-bath, or immediately after sexual indulgence.

69.

सद्यःस्नातस्य भुक्तस्य क्षुतुतृष्णातपसेविनः ।
व्याययश्रान्तदेहस्य समर्थोऽपि न बुध्यति॥ ६९॥

Even when the person is healthy and strong, the pulse will not articulate (properly) immediately after he has had his bath, or food, when he is hungry, thirsty or exposed to sun, or when his body is tired after exercise or sex-activity.

70-72.

भुक्तस्य सद्यः स्नातस्य निद्रितस्योपवासिनः ।
 व्यायामश्रान्तदेहस्य भूतावेशिनि रोदने॥ ७०॥
 सुन्दरीणां च संयोगे मद्यपाने मतिभ्रमे ।
 गन्धारीभक्षणे चैव पवनाभ्याससाधके॥ ७१॥
 कुक्कुटीशशमण्डूकसर्पमांसादिभक्षके ।
 अपस्मारे श्रान्तदेहे नाडी सम्यङ् बुध्यते॥ ७२॥

The pulse will not articulate properly (viz. discernible by the physician) in persons who have just eaten their fill, who have just bathed, who are asleep, who have been fasting, who have been fatigued after exercise, who are possessed by spirits, who have been crying, who have just had sexual congress with women, who are drunk, who are deluded, who have taken gānjā, who are practising control of breath, who have eaten the flesh of hen, rabbit, frog or snake, who are epileptics and who are physically exhausted.

73.

नाडीगतिमविज्ञाय यः करोति चिकित्सितम् ।
 आरोहति गिरि सोऽन्यस्तस्य यानसमं विदुः॥ ७३॥

The physician who seeks to cure (the disease) without priorly ascertaining the nature of pulse, would be like the blind man attempting to climb a hill.

IV. Exerpts from NĀDI DARPAṆA

49.

अङ्गुष्ठमूले करयोः पादयोर्गुल्फदेशतः ।
 कपालपार्श्वयोः षड्भ्यो नाडीभ्यो व्याधिनिर्णयः॥ ४९॥

The (nature etc.) of the disease can be ascertained by (examining) the pulse in six places (of the body): below the thumb in each of the two hands, in the ankle of each foot, on the temples on both sides of the head.

50.

नाभ्योष्ठपाणिपात्कण्ठनासोत्तेषु याः स्थिताः ।
 तासु प्राणस्य सञ्चारं प्रयत्नेन विभावयेत्॥ ५०॥

The physician must, with effort, recognize the course of the vital current in the navel region, in the lips, in the hands, in the feet, in the neck, and around nostrils.

51.

पाणिपात्कण्ठनासाक्षिकर्णजिह्वान्तमेढरगाः ।
 वामदक्षिणतो लक्ष्याः षोडश प्राणबोधकाः॥ ५१॥

The arteries on the left and the right sides of the following eight parts of the body, thus making sixteen arteries, reveal the (nature etc.) of the vital current: hands, feet, neck, nose, eyes, ears, tip of the tongue nad the genital organ.

52.

आगन्तुकं ज्वरं तृष्णामायासं मैथुनं क्लमं ।
 भयं शोकं च कोपं च कण्ठनाडी विनिर्दिशेत्॥ ५२॥

The pulse in the neck will indicate āgantujvara, thirst, exertion, sexual indulgence, fatigue, fear, sorrow and anger.

53.

मरणं जीवनं कामं कण्ठरोगं शिरोरुजाम् ।
 श्रवणानिलजान् रोगान्नासानाडी प्रकाशयेत्॥ ५३॥

The pulse in the nose will reveal (foreboding) death, (the condition of) life, oppressive desires, diseases of the neck of the head and of the ears, as also disorders caused by vāta.

54.

हस्तयोश्च प्रकोष्ठान्ते मणिबन्धेऽङ्गुलिद्वयम् ।
 पादयोर्नाडिकास्थानं गुल्फस्याधोऽङ्गुलिद्वयम्॥ ५४॥

The pulse in the hands is located in the wrist

at the root of the thumb; two angulas in extent is the part of the artery that must be felt for examination. In each foot, the pulse for examination is located below the ankle, and extends to two angulas.

55.

कण्ठमूलेङ्गुलिद्वन्द्वं नासायामङ्गुलिद्वयम् ।
एवमप्यङ्गुलिद्वन्द्वमग्रतः कर्णरन्ध्रयोः॥ ५५॥

The pulse for examination in the neck is located at the root of the throat, two angulas in extent; in the nose too, its extent is two angulas. Likewise, the pulse in each ear extends two angulas in length, above the ear-lobe.

56.

निस्तुषयव एकस्तत्प्रमाणाङ्गुलं स्यात्
तदुभयमित सदमन्येव नाडीप्रचारः ।
न भवति यदि तस्मिन् गेहिनी गेहमध्ये
कथमिह गृहमेधी तत्र जीवस्तदा स्यात्॥ ५६॥

The angula is the measure equal to a single barley corn, with its husk removed. Two such angulas constitute the area in which the pulse articulates. If in the center of that little house, the mistress (viz. the pulse) did not dwell, how indeed could a householder (viz. the individual self, jīva) endure in that house?

2,4.

स्थिरचित्तः प्रशान्तात्मा मनसा च विशारदः ।
स्पृशेदङ्गुलिभिर्नाडीं जानीयादक्षिणे करे॥ २,४॥

The physician whose mind is steady (viz. free from distractions), calm (viz. free from anxiety, care or worry), and proficient (viz. learned in the art and science of pulse examination), should with his (three) fingers feel the pulse in the patient's right hand.

2,5.

पीतमद्यश्चञ्चलात्मा मलमूत्रादिवेगयुक् ।
नाडीज्ञानेसमर्थः स्याल्लोभाक्रान्तश्च कामुकः॥ ५॥

One who is intoxicated with liquor, who is fickle-minded, who is oppressed by natural urges to eliminate faeces, urine etc, who is greedy, or who is lustful, will be incapable of apprehending the pulse.

2,6.

त्यक्तमूत्रपुरीषस्य सुखासीनस्य रोगिणः ।
अन्तर्जानुकरस्यापि नाडी सम्यङ् प्रबुद्धते॥ ६॥

The pulse of the patient can be well apprehended, when he has attended to his natural urges, and when he is comfortably seated, his hands covering his knees.

2,7.

धूर्तमार्गस्थविश्वासरहिताज्ञानगौत्रिणाम् ।
विनाभिशंसनं वैद्यो नाडीद्रष्टा च किल्बिषी॥ ७॥

The physician who examines the pulse of the following persons will only acquire demerit: those who are rogues, those who are walking on the road, those who have no confidence (in the physician), those whose background is unknown, and those who (whose relatives) do not solicit the physician to examine the patient.

2,14.

भाविरोगावबोधाय सुस्थनाडीपरीक्षणम्॥ १४॥

The pulse (even) of a healthy person may be examined in order to understand the disorders that are likely to occur at a future time.

2,15.

स्पर्शनादिभिरभ्यासान्नाडीज्ञो जायते भिषक् ।
तस्मात् परामृशेन्नाडीं सुस्थानामपि देहिनाम्॥ १५॥

It is only by practice of feeling etc. of the pulse that a physician becomes an adept in pulse-examination. Therefore, one should

carefully examine the pulse even of healthy people.

2,16.

स्पर्शनात्पीडनाद्धाताद्वेदनात्मर्दनादपि ।
तासु जीवस्य सञ्चारं प्रयत्नेन निरूपयेत्॥ १६॥

By touching, pressing, tapping, sensing, and kneading, one must discern with effort the flow of vital current in them (viz. in the pulse at the eight spots of the body mentioned above).

2,17.

गुरुतोत्र प्रयत्नेन वैद्येन शुभमिच्छता ।
ज्येष्ठेनाङ्गुष्ठमूलेन नाडीपुच्छं परीक्षयेत्॥ १७॥

The physician, who seeks to prosper, must with effort (learn) from a teacher how to discern the tail of the pulse at the root of the thumb, (viz. the large area of the palm below the thumb).

2,18.

नाडी वायुप्रवाहेन शास्त्रं दृष्ट्वा च बुद्धिमान् ।
गुरुपदेशं संस्मृत्य परीक्षेत मुहुर्मुहुः॥ १८॥

The clever physician must repeatedly examine the pulse on the basis of the flow of the vital current, having studied the texts, and keeping in mind the instructions of his preceptor.

2,19.

वारत्रयं परीक्षेत धृत्वा धृत्वा विमुच्य च ।
विमृश्य बहुधा बुद्ध्या रोगव्यक्तिं तु निर्दिशेत्॥ १९॥

(The physician) must feel the pulse three times, each time pressing the pulse and releasing it, then consider all the details intelligently, and (finally) determine the (nature etc.) of the particular disease.

2,20.

अङ्गुलित्रितयैः स्पृष्ट्वा क्रमोद्दोषत्रयोभ्दवैः ।
मन्दां मध्यगतां तीक्ष्णां त्रिभिर्दोषैस्तु लक्षयेत्॥ २०॥

(The physician) must feel with his three fingers (the patient's pulse) and understand that the sluggish, moderate and intense articulations are caused by the three doshas respectively.

[Note: If the fore-finger feels that the pulse articulates moderately, it is vāta; if the middle finger feels that the pulse articulates intensely (viz. sharp to touch), then it is pitta, and if the ring-finger feels that the pulse articulates slowly (viz. slight to touch), then it is kapha.]

2,23.

पित्तनाडी भवेदुष्णा कफनाडी तु शीतला ।
वातनाडी भवेन्मध्या एवं स्पर्शविनिर्णयः॥ २३॥

The pulse reveals pitta by being warm to touch, kapha by being cold and vāta being moderate (viz. not warm, nor cold). This is the ascertainment by touch.

2,24.

वातनाडी भवेन्नीला पित्तनाडी तु पाण्डुरा ।
श्वेता तु कफनाडी स्यादेवंवर्णानि संवदेत्॥ २४॥

The pulse articulating vāta is bluish in colour, the pulse that articulates pitta is pale (yellowish) white, and the pulse articulating kapha is pure white. This is the understanding by colour.

2,25.

प्रातः स्निग्धमयी नाडी मध्याह्ने चोष्णतान्विता ।
सायान्हे दावमाना च रात्रौ वेगविवर्जिता॥ २५॥

In the morning, the pulse is unctuous, at noontime it is warm, in the evening it is quick, and at night it is devoid of speed.

2,27.

आदौ च वहते पित्तं मध्ये श्लेष्मा तथैव च ।
अन्ते प्रभञ्जनो ज्ञेयः सर्वशास्त्रविशारदैः ॥ २७ ॥

In the beginning, the pulse conveys pitta, in the middle śleshma and at the end vāta. This is the view of all the experts in nādi-pariksha.

2,28-29.

तृणं पुरःसरं कृत्वा यथा वातो वहेद्वली ।
शेषस्थं च तृणं ग्राह्यं पृथिव्यां वक्रगो यथा ॥ २८ ॥
एवं मध्यगतो वायुः कृत्वा पित्तपुरःसरम् ।
स्वानुगं कफमादाय नाड्यौ वहति सर्वदा ॥ २९ ॥

Even as a strong wind blows (a sheaf of) grass in front of it, and gathering up the other blades of grass on the ground, scatters them around, the vāta (in the body) projects pitta ahead, and itself remaining in the middle, conveys kapha after itself. This is how the pulse articulates always.

2,30.

अत एव च पित्तस्य ज्ञायते कुटिला गतिः ।
वक्रा प्रभञ्जनस्यापि प्रोक्ता मन्दा कफस्य च ॥ ३० ॥

It is, therefore, that the articulation of the pulse as pitta is winding, as vāta it is curved, and as kapha it is sluggish.

2,31.

पित्ताग्रेऽस्ति गतिः शीघ्रा तृणस्योति विदृश्यताम् ।
मन्दनुगस्य वक्रा वै मारुतो मध्यगस्य हि ॥ ३१ ॥

The articulation of pitta is quick, like the blade of grass blown in a strong wind. The articulation of kapha is sluggish, even as the blades of grass on the ground after the strong wind has passed. And the articulation of vāta is crooked, even as its course on the ground.

NĀDĪ-CHAKRA

Name:	Vāta:	Pitta:	Kapha:
Colour	dark greenish	yellowish, reddish bluish	whitish
Touch	not warm, nor cold	warm	cold
Measure	uneven	long	short
Smell	no smell	strong smell	moderate smell
Inclination	across	upward	downward
Heaviness	light	light	heavy
Time of aggravation	night	day	night

V. Kaṇāda's NĀDĪ-VIJNĀNAM

1.

यद्वक्त्रेभ्यः पञ्चसंख्या गतेभ्यो
वेदा जाता ऋग्यजुःसामरूपाः ।
सायुर्वेदाथर्ववेदश्च तस्मिन्
आस्तां शम्भौ श्रीकणादस्य भक्तिः ॥ १ ॥

May Kaṇāda's devotion be (settled) in Śambhu (viz. Siva), from whose five mouths (i.e. faces) the five (scriptures), to wit, Rīg-veda, Yajur-veda, Sāma-veda, Ātharva-veda along with Āyurveda came out (viz. became current in the word).

2.

आस्ते वेदः पञ्चमो वैद्यकाख्यो
वक्त्रा कश्चित्तस्य नास्ते महेशात् ।
तस्माद्भाताऽध्यैष्ट तस्मात्तुराषट्
तस्माज्ज्ञात्वा वक्तुमर्हामि शास्त्रम् ॥ २ ॥

The fifth scripture is this veda known as medicine, and none other than Maheśa (viz. śiva) knows it. It was from Him that the creator (Brahma) learnt (this discipline), and from him (from Brahma), Indra (learnt). Having learnt (this discipline) from him (from Indra), I am able to communicate this science (to you all).

3.

सार्धत्रिकोट्यो नाड्यो हि स्थूलाः सूक्ष्माश्च देहिनाम् ।
नाभिकन्दनिबद्धास्तिर्यगूर्ध्वमधःस्थिताः ॥ ३ ॥

In the embodied ones, there are three crores*, and half in arteries (nāḍī), both gross¹ and subtle², rooted firmly in the navel region and spreading across, above and below.

Note : *A crore (koṭi) is ten millions.

The expression nāḍī (derived from naḍa, meaning a hollow stalk) signifies generally any tube or pipe, vein or artery in the body, and more specially the pulse. Words like *dhamanī* and *sirā* are often used synonymously, with nāḍī.

¹large, bulky, thick; the commentator explains that it signifies having identifiable parts (parīṇatāvayavah)

²thin, almost invisible.

4.

द्रासप्ततिसहस्रं तु तासां स्थूलाः प्रकीर्तिताः ।
देहे धमन्यो धन्यास्ताः पञ्चेन्द्रियगुणावहाः ॥ ४ ॥

Of them (viz. the three crores and a half of arteries), seventy two thousand are said to be gross, and (are called) *dhamanīs* (major arteries). They are excellent expedients, in as much as they allow the five sensory processes to course through them.

5.

तासां च सूक्ष्म सुषिराणि शतानि सप्त
स्युस्तानि यैरसकृदन्नरसं वहद्भिः ।
आप्याय्यते वपुरिदं हि नृणाममीषाम्
अम्भः स्रद्धिरिव सिंधुशतैः समुद्रः ॥ ५ ॥

Among them (viz. the seventy two thousand *dhamanīs*), seven hundred are the hollow canals through which the food-juices are conveyed incessantly. The body of human beings is flushed by these, even as the ocean is by the waters of a hundred rivers flowing into it.

6.

आपादतः प्रततगात्रमशेषमेषा
मामस्तकादपि च नाभिपुरःस्थितेन ।
एतन्मृदङ्ग इव चर्मचयेन नद्धम्
कायं नृणामिह सिराशतसप्तकेन ॥ ६ ॥

By these seven hundred veins (sirā), the entire body of human beings is bound from sole of the feet to the top of the head, with the navel region as the foremost (centre), even as the drum is bound by leathern thongs.

7.

शतसप्तानां मध्ये चतुरधिकविंशतिः स्फुटास्तासामेका ।
परीक्षणीया या दक्षिणकरचरणविन्यस्ता ॥ ७ ॥

Of these seven hundred arteries, twenty-four are vividly perceptive (on examination by the physician). Of them (however), but one is to be examined, to wit the one that courses through (beginning with) the right hand and (spreads to) the right foot.

Note : In the case of women, the left side and in men right side is to be preferred for examination, according to the Todala-tantra, 8th ullasā. In the case of hermaphrodites, the side is to be preferred according to predominant features, characteristic of male or female.

8.

तिर्यक्कूर्मो देहिनां नाभिदेशे
वामे वक्त्रं तस्य पुच्छं च याम्ये ।
ऊर्ध्वं भागे हस्तपादौ च वामौ
तस्याधस्तात् संस्थितौ दक्षिणौ तौ ॥ ८ ॥

In the human beings, situated obliquely in their navel region is the 'tortoise' (viz. structure of the basic arteries resembling the form of a tortoise): its head is on the left side (of the human beings), its tail on the right side; upward are the left hand and left leg (of tortoise), and downward are the right hand and the right leg (of the 'tortoise')

9.

वक्त्रे नाडीद्वयं तस्य पुच्छे नाडीद्वयं तथा ।
पञ्च पञ्च करे पादे वाम दक्षिणभागयोः ॥ ९ ॥

In its head there are two arteries, and in the tail two; and five in each of the hands and legs on the left and right sides.

Note : The imagery of the tortoise is intended here to suggest the form of the basic organization of arteries (nāḍi-chakra) at the navel region. While the main body (torso) of the tortoise is the same in men and women, the left members are upward and the right members downwards in the case of men, and the portions are reversed in women. Hence the artery organization tilts towards right in males, and towards left in females. Hence, the examination of the pulse of the right hand in male patients, and the pulse of the left hand in female patients.

10.

वातं पित्तं कफं द्वन्द्वं सन्निपातं रसं त्वसृक् ।
साध्यासाध्यविवेकं च सर्वं नाडी प्रकाशयेत् ॥ १० ॥

The main artery (referred to in verse 7, and called hereafter the pulse) will reveal everything concerning the three doshas (vāta, pitta, kapha), operating separately, operating in pairs and operating jointly (viz. all three together), as also the (condition of) the rasa, and of the blood, the curability or otherwise (of disease) and (other bodily constituents) and information concerning the curability of diseases.

Note : Diseases are classified according to how they are caused: (a) by a single dosha becoming errant; (b) by two doshas becoming errant together; and (c) by all three doshas becoming errant at the same time. The bodily constituents (dhātus) are seven-fold: rasa, blood, muscle, fat, bone, bone-marrow and semen.

11.

सव्येन रोगधृतिकूर्परभागमध्यं
पीड्याथ दक्षिणकराङ्गलिकात्रयेण ।
अङ्गुष्ठमूलमधिपश्चिमभागमध्ये
नाडीं प्रभञ्जनगतिं सततं परीक्षेत् ॥ ११ ॥

(The physician must) with his left hand press well (or squeeze) all over the right fore-arm (from elbow to the wrist) of the patient¹, and

then feel², with the three fingers, of his (physician's) right hand³, the pulse below the patient's thumb on the inner side⁴, and always⁵ examine it for the course of vāta.⁶

Note : In order to enable the disordered doshas to surface and manifest themselves clearly at the pulse (of the same hand) during examination.

2. **atha :** The pulse must be examined **only after** the pressing continued during examination.

3. The three fingers are: fore-finger, (tarjani), the middle finger (madhyama) and the ring-finger (anāmika).

4. **Paśichima-bhāga-madhya :** The distance of two angulas inward from the little joint (kshudra-granthi) below the pulse is most clearly manifest. An angula is a finger's breadth, equal to eight barley-corns placed alongside; it will be slightly less than an inch. Twelve angulas make a span (vitasti); and twenty-four angulas make a cubit (hasta), which is about eighteen inches.

5. **Satatam**, even in normal condition (sustha-dasāyām api), for such examination will reveal the possibility or otherwise of the onset of disorders.

6. **Prabhañjana-gati**, it is only vāta that course along the other two doshas (pitta, kapha), described as lame (pangu), do not have courses of their own. It is only when vāta provokes them that they become manifest.

12.

प्रातः कृतसमाचारः कृताचारपरिग्रहम् ।
सुखासीनः सुखासीनं परीक्षार्थमुपाचरेत् ॥ १२ ॥

The physician, having attended to his physical needs and having performed his ablutions in the morning*, and himself comfortably seated should make the patient, (who has also attended to his physical needs, and has performed his ablutions in the morning) comfortably seated for the purpose of pulse-examination.

Note : * Early morning is said to be the best time for pulse examination, for in the afternoon the pulse will be warm and in the evening rapid.

13.

तैलाभ्यङ्गे च सुप्ते च तथा च भोजनान्तरे ।
तथा न ज्ञायते नाडी यथा दुर्गता नदी ॥ १३ ॥

The pulse is difficult to be read aright, when the patient has just had an oil-bath, when he is asleep, or while he is having his food. Also immediately after he has finished his food. The pulse will then be like a turbid river.

14.

अङ्गुष्ठस्य तु मूले या सा नाडी जीवसाक्षिणी ।
तस्या गतिवशात् विद्यात् सुखं दुःखं च रोगिणाम् ॥ १४ ॥

The pulse that is (located) at the roof of the thumb* is the witness to all the vital activities (in the body). It is by the articulations of the pulse that one can understand the patient's happiness and unhappiness.**

Note : * viz. just below the thumb on the wrist, right under the forefinger;

* viz. health, balance of the doshas;

* viz. ill-health, disorders of doshas;

* although the expression 'roginām' ("of the patient") is used, what is said applies equally to the healthy people.

15.

स्नायुनाडी वसा हिंसा धमनी धरा ।
तन्तुकी जीवितज्ञा च शिरा पर्यायवाचिकाः ॥ १५ ॥

These are the ten synonyms of the 'pulse': snāyu¹ nāḍi, vasā², himsrā³, dhamanī⁴ dharā⁶, tantuki⁷, jīvitajñā⁸ and sirā⁹.

Notes : 1. Muscle, it may mean here the muscular tube;

2. Serum or fat of the muscle, any fatty or oily substance;

3. literal meaning is cruel, wild: also, it means a vein;

4. blow-pipe, any tubular vessel;

5. dwelling place;

6. carrying, sustaining, holding;

7. lit. thread-line;

8. lit. life-scanner;

9. also written sirā, lit. vein-like channel (from the root śrēm), a narrow stream of river water.

16.

आदौ च वहते वातो मध्ये पित्तं तथैव च ।
अन्ते च वहते श्लेष्मा नाडिकात्रयलक्षणम् ॥ १६ ॥

At the beginning¹ it (viz. the pulse) is vāta, in the middle pitta², and at the end śleshmā (kapha). These are the characteristics of the three-fold pulse.

Note : The commentators explain that the expression 'āḍau' refers to the time immediately after the pressing of the patient's forearm (as mentioned above, verse 11), and not to the fore-finger (tarjani) which apprehends vāta. But it is recognised that after the pressing of the forearm, the vāta becomes clearly perceptible. The commentators also refer to sutra

21 where it is said that vāta gets aggravated in the morning when the food (eaten the previous night) is all digested, and when the air is cool; pitta in the afternoon when it is hot and also at midnight when the food (eaten at noon or in the evening) is getting digested; and śleshmā during forenoon and evening, when food has just been eaten. 2. The middle finger (which apprehends pitta), being longer than the other two fingers is the first to feel the pulse. The next to feel the pulse is the ring-finger, and the last is the forefinger.

17.

वाताधिका वहेन्मध्ये त्वग्रे वहति पित्तला ।
अन्ते च वहति श्लेष्मा मिश्रिते मिश्रलक्षणा ॥ १७ ॥

Aggravation of vāta is revealed in the middle¹, aggravation of pitta at the top², and the (aggravation of) śleshmā at the bottom³, and when the doshas are mixed up, their (locations) also are mixed⁴.

Note : 1. the middle finger feels more readily than the other two fingers the rapid articulations of the pulse; it suggests that the disorder is due to the excitation of vāta; There is also a view that "in the middle" here refers to the area between the fore-finger and the ring-finger.

2. If the fore-finger (referred to here as "at the top"), more than the other two fingers, feels the rapid pulse-articulations, the disorder is due to the excitation of pitta; There is a view that "the top" here refers to the root of the thumb.

3. If the ring-finger (referred to here as "the bottom"), more than the other two fingers, feels the rapid pulse-articulations, the disorder is due to the excitation of śleshmā.

4. If the articulations of the pulse are rapid in the region comprehending both the middle finger and fore-finger (of the physician), then the disorder is due to the conjoint aggravation of pitta and vāta. If the articulations of the pulse are rapid and mixed in manner in the region comprehending the middle finger and the ring-finger, then the disorder is due to vāta; if the articulation of pulse is felt feebly by the middle finger, then the disorder is pitta-śīta; if the pulsations are mixed by all three fingers, then the disorder is due to the aggravations of all three doshas.

18.

आदौ च वहते पित्तं मध्ये श्लेष्मा तथैव च ।
अन्ते प्रभञ्जो ज्ञेयः सर्वशास्त्रविशादः ॥ १८ ॥

At the beginning, pitta is conveyed; in the middle, śleshmā; and at the end, vāta. Thus it is known by the experts of all sciences.

Note : This verse apparently goes against what is said in verse 16. But see notes 1 and 2 of that verse. "At the beginning" here is to be interpreted as perceptible first to the middle finger, for it is longer than the other two fingers; then śleshmā is apprehended by the ring-finger and finally, vāta by the fore-finger. It is well known that the first finger represents vāta, the second (viz. the middle finger) pitta and the last one (viz. the ring-finger) śleshmā.

19.

भूलता भुजगप्राया स्वच्छा स्वास्थ्यमयी सिरा ।
सुखितस्य स्थिरा ज्ञेया तथा बलवती मला । १९ ॥

The pulse of a healthy man resembles in its articulation the form of a ground-creeper¹ or the movement of a snake²; is free from disorders (unruffled and even), firm (steady³) and powerful⁴.

Note : 1. The commentaries explain that the creeper referred to here is *śamkha-pushpi*, *Cansocora decussata*, or alternately, it means an earthworm (*kinchulika*).

2. The movement that is soft and winding (*masṛṇa*, *vakra*).

3. Involving also slow movement,

4. Thick to touch, but free from disorders.

20.

प्रातः स्निग्धमयी नाडी मध्यन्हेऽप्युष्णतान्विता ।
सायान्हे धावमाना च चिराद्रोगविवर्जिता । २० ॥

In the morning, the pulse of one who has not been well since long is soft and unctuous, at noon it is felt with warmth, and in the evening it is quick in articulation (viz. tremulous).

21.

वातात् वक्रगता नाडी चपला पित्तवाहिनी ।
स्थिरा श्लेष्मवती ज्ञेया मिश्रिते मिश्रिता भवेत् । २१ ॥

The pulse articulates crookedly in disorders caused by the aggravation of *vāta*, tremulously in disorders caused by the aggravation of *pitta*, and all too rigidly in disorders caused by aggravation of *śleshma*; the articulation is mixed, when the disorders have been caused by the aggravation of the *doshas* conjointly.

22.

सर्पजलौकादिगतिं वदन्ति विबुधाः प्रभञ्जनेन नाडीम् ।
पित्तेन काकलावक भेकादिगतिं विदुः सुधियः ।
राजहंसमयूराणां पारावतकपोतयोः ।
कुक्कुटस्य गतिं धत्ते धमनी कफसंवृता । २२ ॥

Experts tell (us) that in disorders caused by

vāta, the pulse articulates in the way the serpent or a leech moves; in disorders caused by *pitta*, it resembles the movement of a cock.

23.

मुहुःसर्पगतिं नाडीं मुहुर्भेकगतिं तथा ।
वातपित्तद्वयोद्भूतां तां वदन्ति मनीषिणः ॥ २३ ॥

The wise ones say that the pulse affected by (the disorders of) both *vāta* and *pitta* will, at times, articulate like the (winding) movement of a serpent, and at other times, like the (leaping) movement of a frog.

24.

भुजगादिगतिं नाडीं राजहंसगतिं तथा ।
वातश्लेष्मसमुद्भूतां भाषन्ते तद्विदो जनाः ॥ २४ ॥

Those who are well-versed (in the science of pulse) speak of the pulse affected (by disorders of) both *vāta* and *śleshmā* as articulating like the movement of a serpent now and that of a swan at other times.

25.

मण्डूकादिगतिं नाडीं मयूरादिगतिं धराम् ।
पित्तश्लेष्मसमुद्भूतां प्रवदन्ति विचक्षणाः ॥ २५ ॥

The experts (in the science of pulse) tell (us) that the pulse affected by (the disorders of) both *pitta* and *śleshmā*, now articulates like the (leaping) movement of a frog, and now like the (strutting) movement of a peacock.

26.

सूक्ष्मा शीता स्थिरा नाडी पित्तश्लेष्मसमुद्भवा ।
कफवेगोद्भवा नाडी सर्पहंसगतिर्भवेत् । २६ ॥

The pulse characterized by (the disorders of both) *pitta* and *śleshmā* will be subtle, cold, and stable; and the pulse, characterized by (the disorders of both) *kapha* (viz. *śleshma*) and *vāta*, will articulate like the movement of a serpent or a swan.

27.

उरगादिलावकादिहंसादीनां च बिभ्रती गमनम् ।
वातादीनां च समं धमनी सम्बन्धमाधत्ते ॥ २७ ॥

When the pulse bears the relations of all the three (doshas) equally¹, it articulates like the movements of serpent², of quail³, and of swan.^{4&5}

Note : 1. when none is more or less than others.

2. serpent, leech and scorpion.

3. quail etc., other birds of the same family;

4. swan etc. pigeon, elephant, woman, dove.

5. When the three doshas together are responsible for the disease, if the pulse articulates in the beginning like a serpent, then like a quail and finally like a swan, then the prognosis is good. In the case of articulation of pitta in the beginning, of vāta in the middle, and of kapha at the end, then the disease is either difficult to cure or is incurable.

28.

लावतिरतिरिवार्तकगमनं सन्निपाततः ।
कदाचिन्मन्दगा नाडी कदाचिच्छीघ्रगा भवेत् ।
त्रिदोषप्रभवे रोगे विज्ञेया सा भिषग्वैः ॥ २८ ॥

When the three doshas are disordered together, the pulse articulates like (the movements of) a quail, a partridge, or a sparrow; if, sometimes, the pulse articulates sluggishly and, at other times, rapidly, it must be understood that the disease is caused by (the disorder of) all three doshas.

29.

मन्दं मन्दं शिथिलशिथिलं व्याकुलं व्याकुलं वा
स्थित्वा स्थित्वा वहति धमनी याति नाशं च सूक्ष्मा ।
नित्यं स्थानात् स्खलति पुनरङ्गुलीं संस्पृशेद्वा
भावैरेवं बहुविधविधैः सन्निपातादासाध्या ॥ २९ ॥

When the three doshas are disordered together, if the pulse articulates sluggishly, loosely, agitatedly, or haltingly, or if the articulation becomes imperceptible or subtle or if the articulation is not felt in its proper place (in the physician's fingers) or is felt after much delay, all these and other conditions indicate that the disease (caused by the three doshas together) is impossible to cure.

30.

उत्पुच्छका स्थिरात्यन्ता या चेयं मांसवाहिनी ।
या च सूक्ष्मा च वक्रा च तामसाध्यां विनिर्दिशेत् ॥ ३० ॥

It must be understood that the disease is incurable if the pulse articulates, as in the case of one who eats flesh¹, prominently², extremely rigidly³, or imperceptibly or crookedly.

Note : 1 māmśa-vāhinī, the expression is taken by some to mean the pulse moving with flesh in the manner of a cudgel (laguḍa). But it is more usual to take the expression to mean the pulse of a meat-eater (māmsāhāra);

2 viz. when it seems to rush out to meet the physician's finger;

3 viz. when the articulation of the pulse can be noticed only with great attention.

VI. Excerpts from NĀDI-JNANA-PRAKĀSIKĀ

(Giving a general account of the nādi-system.)

3.

तिस्रः कोट्योर्धकोटी च यानि लोमानि मानुषे ।
नाडीमुखानि सर्वाणि धर्मबिन्दुं क्षरन्ति च ॥ ३ ॥

There are three crores and a half (crore) hair-pores which constitute the outlet of the arteries; through these, sweat emanates.

4.

नाना नाडीप्रसवगं सर्वभूतान्तरात्मनि ।
अर्ध्वमूलमधःशाखं वायुमार्गेण सर्वगम् ॥ ४ ॥

There is one subtle artery, which is the foundation for all the arteries, inside all living beings, and this pervades the entire body through the vital currents that flow upward and downward.

10-11.

इळा च पिङ्गला चैव सुषुम्णा च सरस्वती ।
वारुणी चैव पूषा च हस्तिजिह्वा यशस्विनी ॥ १० ॥
विश्वोदरी कह्लूश्चैव शंखिनी च पयस्विनी ।
अलंबुसा च गांधारी मुख्याश्चैव तत्त्वतुर्दश ॥ ११ ॥

Fourteen arteries are important: the arteries named idā, piṅgalā, sushumnā, sarasvatī, vāruṇī, pūshā, hastijihvā, yaśasvinī, viśvodarī, kuhū, śamkhinī, payasvinī, ālaṃbushā, and gāndhārī.

12-13.

इळा च पिगला चैव सुषुम्णा च सरस्वती ।
गांधारी हस्तिजिह्व च कुहू पूषा यशस्विनी ॥ १२ ॥
चारणालंबुसा विश्वा शंखिनी च पयस्विनी ।
एताः प्राणवहा नाड्यो जीवकोशे प्रतिष्ठिताः ॥ १३ ॥

These arteries convey the vital current (to all parts of the body), and are established in the vital sheath.

14-15-16.

तत्र प्रधाना नाड्यस्तु दशवायुप्रवाहिकाः ।
इळापिगलयोश्चैव सुषुम्णा चोर्ध्वगामिनी ॥ १४ ॥
गांधारी हस्तिजिह्व च प्रसारगमने स्थिता ।
अलंबुसा यशस्विन्यौ दक्षिणांगे समन्विते ॥ १५ ॥
कुहूश्च शंखिनी चैव वामांगे चावलंबिता ।
एतासु दशनाडीषु नानाकार्यप्रसूतिका ॥ १६ ॥

Of the fourteen arteries (mentioned above), ten are chiefly concerned with the conveyance of the ten vital currents (to be mentioned later). The three arteries, idā, piṅgalā and sushumnā course upward. The two arteries, gāndhārī and hastijihvā help the hands to stretch and legs to walk. Two arteries ālaṃbushā and yaśasvinī course on the right side, and two, kuhū and śamkhinī, on the left side.

17-18-19.

इळा च वामनासायां दक्षिणे पिगलामता ।
सुषुम्णा ब्रह्मरंध्रे च गांधारी वामचक्षुषि ॥ १७ ॥
दक्षिणे हस्तिजिह्व च पूषा कर्णेऽथ दक्षिणे ।
वामे यशस्विनी ज्ञेया मुखे चालंबुसा मता ॥ १८ ॥
कुहूश्च लिंगमूले स्यात् छंखिनी शिरसोपरि ।
एवं द्वारं समश्चित्य तिष्ठन्ति दश नाडिकाः ॥ १९ ॥

The ten arteries are settled at the following outlets: idā at the left nostril, piṅgalā at the

right nostril, sushumnā on top of the spinal column (brahma-randhra), gāndhārī in the left eye, hastijihvā in the right eye, ālaṃbushā on the tongue, kuhū at the root of the penis, and śamkhinī on top of the head.

20-21.

प्राणोपानः समानश्च उदानो व्यान एव च ।
नागः कूर्मोऽथ कृकरो देवदत्तो धनंजयः ।
एते नाडीषु सर्वासु चरन्ति दश वायवः ॥ २० ॥
एतेषु वायवः पंच मुख्या प्राणादयः स्मृताः ।
तेषु मुख्यतमावेतौ प्राणापानौ नरोत्तमे ।
प्राण एवैतयोर्मुख्यः सर्वप्राणभृतां सदा ॥ २१ ॥

Ten vital currents are important inasmuch as they course through all the arteries: prāṇa, apāna samāna, udāna, vyāna, nāga, kūrma, kṛkara, devadatta and dhanañjaya. Of them, five are especially significant: prāṇa, apāna, samāna, udāna and vyāna.

22-23.

शब्दग्रहा श्रुतौ नाडी रूपं गृह्णाति लोचने ।
गंधग्रहा नासिकायां रसनायां रसावहा ॥ २२ ॥
एवं त्वक्षु स्पर्शवहा शब्दकृद्धृदयान्मुखे ।
मनो बुद्ध्यादिकं सर्वं हृदयेषु प्रतिष्ठितम् ॥ २३ ॥

The arteries in the ear apprehend sound, those in the eyes perceive form, the artery in the nostrils apprehends smell, that in the tongue apprehends taste; likewise, the arteries in the skin perceive touch, and the arteries located in the heart and mouth help produce sound. Mind, consciousness etc. are located in the heart (for when the mind is dissolved in the artery of the heart known as purītat, sleep ensues).

Note:- There is a reference to two texts, *Śārādā* and *Yogārṇava*, where names of the arteries are given. *Yogārṇava* contains an account of the nature, form and functions of seven arteries, gāndhārī, hastijihvā, pūshā, ālaṃbushā, yaśasvinī, śamkhinī and kuhū.

25.

इळा पृष्ठे तु गांधारी मयूरगलसंनिधा ।
सव्यपादादि नेत्रान्ता गांधारी परिकीर्तिता ॥ २५ ॥

At the back of (the main artery, iḍā) is located (the artery known as) gāndhārī, (blue in colour) like the neck of a peacock, beginning with the left foot and extending to the (left) eye.

26.

हस्तिजिह्वत्प्रेक्षा नाडी तस्याः पुरःस्थिता ।
सव्यभागस्य मूर्धादि पादांगुष्ठांतमाश्रिता ॥ २६ ॥

In front of the (main artery, iḍā) is situated (the artery known as) hastijihvā, having the colour of a water-lily (a bluish hue), extending from the left-side of the head to the big toe of the left foot.

27.

पूषा तु पिङ्गला पृष्ठे नीलजीमूतसंनिभा ।
याम्य भागस्य नेत्रान्ता यावत्पादतलंगता ॥ २७ ॥

At the back of (the main artery, piṅgalā) is situated (the artery known as) pūshā (dark blue in colour) like the dense cloud, extending on the right side from the eye to the sole of the foot.

28.

अलंबुसा रक्तवर्णा नाडी तस्याः पुरः स्थिता ।
पादांगुष्ठान्तमारभ्य नेत्रान्तं दक्षिणे श्रिता ॥ २८ ॥

In front of (the main artery, piṅgalā) is located (the artery known as) ālambushā, red in colour, extending on the same (right) side from the eye to the big toe of the foot.

29.

यशस्विनी शंखवर्णा पिङ्गला पूर्वदेशगा ।
पादांगुष्ठान्तमारभ्य दक्षमूर्धान्तमाश्रिता ॥ २९ ॥

To the east of piṅgalā is located (the artery known as) yaśasvini, like the colour of the conch, white, extending on right side, from the head to the big toe of the foot.

30.

गांधार्याश्च सरस्वत्या मध्यस्था शंखिनी मता ।
सुवर्णवर्णा पादादि कर्णान्ता सव्यभागके ॥ ३० ॥

Between (the arteries) gāndhārī and sarasvatī is located (the artery called) Śaṁkhinī, golden in colour, and extending on the left side from the foot to the ear.

31.

कुहूः प्रोक्ता श्वेतवर्णा वारुणी पूषमध्यगा ।
पादांगुष्ठादि मूर्धातां याम्यभागे कुहूर्मता ॥ ३१ ॥

In between (the arteries) vāruṇī and pūshā is located (the artery known as) kuhū, white in colour, and extending on the southern side (right) from the big toe of the foot till the top of the head.

32.

विश्वोदरी शंखिनी च रावना च सरस्वती ।
एताश्चतुर्नाड्य उक्ताः प्रधानत्वेन पण्डितैः ॥ ३२ ॥

The scholars speak of four arteries prominently: viśvodarī, śaṁkhinī, varuṇī (?) and sarasvatī.

33.

मुक्तिमार्गे सुषुम्णा सा ब्रह्मरंध्रेति कीर्तिता ।
अव्यक्ता सा च विज्ञेया सुषुम्णा वैष्णवी स्थिता ॥ ३३ ॥

Because (the main artery) sushumnā is located on the road to liberation, it is called the aperture of the absolute. It is to be understood as unmanifest and as representing (the god of preservation) Vishnu.

34.

तासां तिस्रः प्रधानास्तु तिसृष्वेकोत्तमा मता ।
ऽल्ला च पिङ्गला चैव सुषुम्णा च तृतीयका ॥ ३४ ॥

Among the arteries (mentioned above), three are major ones; and of the three, one is regarded as most important. The three

(major arteries) are *idā*, *piṅgalā* and *sushumnā*.

35.

तत्रैका वामतो यति द्वितीया दक्षिणे तथा ।
मध्ये वायुपथं विद्यात् त्रिभिस्तुल्यं गतागतम् ॥ ३५ ॥

Among the three (major) arteries, one (viz. *idā*) courses on the left side, and another (viz. *piṅgalā*) on the right side; the third (viz. *sushumnā*) courses in the middle. The vital current courses through all three alike.

36.

इळा च शंखचन्द्राभा तस्या वामेवस्थितिः ।
पिंगला सितरक्ताभा दक्षिणं पार्श्वमाश्रिता ॥ ३६ ॥

(The artery known as) *idā* shines like a conch, like the moon, and is located on the left-side (of the central artery, *sushumnā*); (the artery known as *piṅgalā* is a mixture of white and red, and is located on the right side (of *sushumnā*).

37.

चन्द्रः सूर्यो मरुच्चैव त्रयं तिसृष्ववस्थिता ।
तथा रजस्तमःसत्त्वं रात्र्यहःकाल एव च ॥ ३७ ॥

In the three arteries (mentioned above) are settled the three (forces of nature): moon (in *idā*), sun (in *piṅgalā*) and the wind (in *sushumnā*). Likewise, (the three *guṇas*): *rajas* (in *idā*), *tamas* (in *piṅgalā*), and *sattva* (in *sushumnā*). So also, night (is associated with *idā*) and day (is associated with *piṅgalā*) (and undifferentiated with *sushumnā*).

9.

Note: *rajas* represents activity and emotion, and is symbolized as red; *sattva* represents knowledge, purity and goodness, and is symbolized as white; and *tamas*, as inhibition of both *rajas* and *sattva*, represents inactivity and ignorance, and is symbolized as black. There is also an account identifying *sattva* with pleasant attachments (*rāga*), *rajas* with violent aversions (*dvesha*) and *tamas* with delusions (*moha*).

38.

इळा दोषमयी प्रोक्ता पिंगला वह्निरूपिणी ।
वाटवाग्नेयी सुषुम्णा च ब्रह्मद्वारपथानुगा ॥ ३८ ॥

(The artery called) is *idā* of the nature of air; (the artery known as) *piṅgalā* is of the nature of fire; and (the artery known as) *sushumnā* is of the nature of both air and fire and it leads to the aperture of the absolute (viz. liberation).

38.

पद्मकोशप्रतीकाशं सुषिरैश्च विभूषितम् ।
हृदयं तद् विजानीयाद् विश्वस्यायतनं हि तत् ॥ ३९ ॥

The heart must be understood as resembling (an inverted) lotus bud, decorated with perforations (on top); and it is the abode of the whole world.

Note: It is imagined as located above the navel region, and the abode of the absolute or Brahman.

40.

दक्षिणा पिंगला नाडी वह्निमण्डलगोचरा ।
देवयानमिति ज्ञेया पुण्यकर्मानुसारिणी ॥ ४० ॥

The artery (called) *piṅgalā* (arises from the basal pit or *mūlādhāra*) and courses through the right side (of the 'heart' mentioned above); (reaching the thousand-petalled lotus' or *sahasrāra* on top of the head) it goes up to the 'fire region' (carrying the subtle body of the individual after his death, according to the good deeds done by him, along the 'path of gods' (also known as *archirādimārga*).

41.

इळा च वामनिःश्वासा सोममण्डलगोचरा ।
पितृयानमिति ज्ञेया वाममाश्रित्य तिष्ठति ॥ ४१ ॥

(The artery known as) *idā* (also arises from the 'basal pit' or *mūlādhāra*), and courses through the left side (of the 'heart' mentioned above) (and reaching 'the thousand-

petalled lotus' on top of the head it goes up to the 'moon region', (carrying the subtle body of the individual after his death, according to his deeds), along 'the path of the ancestors (called *pitṛ-yāna*).

Note: The two artcles *idā* and *pingalā* are responsible for inbreathing and outbreathing.

42.

गुदस्य पृष्ठभागेऽस्मिन् वीणादण्डस्य देहभृत् ।
दीर्घास्थिमूर्धपर्यन्तं ब्रह्मदण्डेति कथ्यते ॥ ४२ ॥

Beginning with the region of the anus. there is this long spinal column resembling the stem of the lute. (*vīṇā*, the Indian musical instrument); it supports the entire body (coursing from the anus) till the head. It is called 'the column of the absolute' (*brahma-danda*) (because the avenue to the absolute, viz. *sushumna*, is located thereon).

43.

तस्यान्ते सुषिरं सूक्ष्मं ब्रह्मनाडीति सूरिथिः ।
इळापिगलयोर्मध्ये सुषुम्णा सूक्ष्मरूपिणी ॥ ४३ ॥

At the end (viz. on top) (of the column of the absolute), there is a fine aperture (or artery), called by the experts 'the artery of the absolute' (*brahma-naḍi*); (the central artery). *Sushumna* is subtle, and is located in between (the two arteries) *idā* (to the left) and *pingalā* (to the right).

44.

सर्वं प्रतिष्ठितं यस्मिन् सर्वगं सर्वतोमुखम् ।
तस्या मध्यगताः सूर्यसोमाग्निपरमेश्वराः ॥ ४४ ॥

(The verse eulogises that everything is contained in the central artery, *sushumnā*).

48.

क्वचिच्चक्रं च कोशश्च क्वचिज्जीवगृहं स्थितम् ।
अस्मिंश्चक्रे स्थितो जीवः पुण्यापुण्यप्रवेशतः ॥ ४५ ॥

The individuated self (*jīva*) prompted by the good or evil (done earlier), wanders about

this physical body, which is in the nature of an assemblage (*chakra*)¹ at some places, in the nature of sheaths (*kosha*, vessels)² at other places, and in the nature of abodes of the individuated self (*jīva-gr̥ha*)³

Note: 1. e.g. the organization of arteries in the navel region (*nābhi-chakra*) 2. e.g. intestines (*āsaya*) 3. e.g. 'the heart' (*hrdaya*).

49.

प्राणानि सममारूढो देहे भ्रमति सर्वदा ।
तंतुपंजरमध्यस्था यथा भ्रमति लूतिका ॥ ४६ ॥

(The individual self) wanders incessantly in the body along with, and riding, the (five) vital currents (viz. *prāṇa*, *apāna*, *vyāna*, *udāna* and *samāna*).

51.

नाभिरोजो गुदं शुक्रं शोणितं शंखकौ तथा ।
मूर्धा सकण्डहृदयं प्राणस्यायतनं दश ॥ ५१ ॥

There are the ten abodes of the vital current: the navel region, the vital fluid (*ojas*), anus, semen, blood, the two temporal bones (*sankharau*) head, shoulder-joints and the heart.

Note: *Ojas* is the essence of the seven bodily constituents.

52.

त्रिशद्विंशप्रमाणा तु विश्वोदरी द्वयाधिका ।
एकहस्तप्रमाणा स्यात् कंठदेशस्य नाडिका ॥ ५२ ॥

The (artery known as) *viśvodarī* is thirty-two cubits in extent (located inside the abdominal region, *udara*); and one cubit thereof constitutes artery in the neck-region.

Note: *hasta*, cubit, is the length between the elbow and the tip of the middle finger; it equals twenty-four angulas.

53-54.

दशहस्ता ततः पश्चादामाशया प्रकीर्तिता ।
पच्यमानाशया ज्ञेया दशहस्ता ततः परम् ॥ ५३ ॥

पक्वाशया ततः पश्चात् दशहस्ता प्रकीर्तिता ।
एकहस्ता गुह्यदेशे शंखावर्ता तु नाडिका ॥ ५४ ॥

Ten cubits below the artery in the neck (mentioned above is situated the stomach, āmāśaya), and at a distance of ten cubits from it is the small intestine (pachyamānāśaya). And ten cubits away from it, is the large intestine (pakvāśaya). and one cubit is in the region of the anus; the artery is circular in shape, resembling a conch.

55.

भुक्तमामाशये तिष्ठेत् पच्यमानाशये पचेत् ।
पक्वं पक्वाशये तिष्ठेद् वह्निः पववाशयोपरि ॥ ५५ ॥

The food that is eaten, first enters the stomach, then gets digested in the small intestine; the digested food settles down in the large intestine. Above the large intestine is the (digestive) fire. The food is well-digested in the small intestine and the essence of it enters into the large intestine.

56.

रसो भोज्यादिकानां च नाभिनाड्या कलेवरम् ।
सकलं याति मरुता नीयमानः स्वमाश्रयात् ॥ ५६ ॥

The essential portion of the food eaten enters the navel artery, and prompted by the air (within the body) it is then conveyed to all parts of the body.

57-58.

नाभिस्तु कूर्मरूपः स्यान्महानाड्यष्टपादुभवेत् ।
चतस्रः पृष्ठदेशे सुश्वतस्रः क्रोडदेशगाः ॥ ५७ ॥
द्वे द्वे ऊर्ध्वमधश्चापि नाडिके अन्तर्गामिनी ।
ऊर्ध्वगा गलदेशेतु पल्लवौ द्वौ प्रकीर्तिताः ।
तदेका गलतः पञ्च पल्लवा नाडिका स्मृताः ॥ ५८ ॥

The navel is in the form of a tortoise; and it is connected with the eight great arteries constituting the eight limbs of the tortoise. (Of the eight great arteries four are at the back, and four are in the chest region.

(Of the arteries constituting the navel organization), the four at the back extend upward (until the head) and the four in the chest region extend downward (to the soles of the feet). Each of the four arteries extending upward gets split into two in the region of the neck (thus making altogether eight great arteries). One of them which proceed from the neck region gets split five-fold (thus making five arteries).

59.

चक्षोर्नासिकारंध्रे जिह्वोष्ठे श्रवणाधरे ।
आकुंचनकरी ख्याता एवं पृष्ठात् प्रसारिणी ॥ ५९ ॥

(Of the five arteries thus formed), two extend to the eyes, two to the nostrils and one to the tongue. Two other arteries extend to the two lips and two to the ear (thus making in all nine arteries). Another artery extending from the back helps (these nine arteries and) contraction and expansion (of the arteries).

60.

तदेका स्कंधदेशान्तु हस्तगा पञ्चपल्लवा ।
अंगुली क्रोडगा सैव अकुंचनकरी स्मृता ॥ ६० ॥

One of the arteries coming from the back extends downward from the shoulder and reaching the hand gets split five fold and thus, enter into the five fingers in each hand). It helps in contracting and stretching out the fingers.

61.

एवं पृष्ठात् समागत्य प्रसारणकरी स्मृता ।
अधोगा अरुसंध्यंतर्नाडिकाः पञ्च पल्लवाः ॥ ६१ ॥

(Of the four rteries in the chest-region one extends downward, and reaching the thigh-joint splits five-fold, and then enter into the five toes (of each foot). It helps in contracting and stretching of the toes.

62.

कूर्मस्य नवमः पादो लिंगनाडीतीर्थतः ।
मूत्रशुक्रवहे नाड्यौ तस्याः पल्लवतः पुनः ॥ ६२ ॥

The ninth limb of the tortoise (viz. the organization of the arteries at the navel region is called the artery of the genital organ. It splits into two, one exuding urine and the other semen.

63.

तिर्यक्कूर्मो देहिनां नाभिदेशे

वामे वक्त्रं तस्य पुच्छं च याम्ये ।

ऊर्ध्वे भागे हस्तपादौ च वामौ

तस्याधस्तादक्षिणौ संस्थितौ तौ ॥ ६३ ॥

The tortoise (viz. the organization of arteries) lies obliquely in the navel region of all human beings, its head on the left and tail to the right, its left hand and foot face upward, and right hand and foot downward.

64.

वक्त्रे नाडीद्वयं तस्य पुच्छे नाडीद्वयं तथा ।

पंच पंच करे पादे वाम दक्षिणभागयोः ॥ ६४ ॥

There are two arteries in the head, two in the tail, and five each of the hands and legs on both the sides.

71.

स्त्रीणामूर्ध्वमुखः कूर्मः पुंसां पुनरधोमुखः ।

अतः कूर्मव्यतिक्रान्तात् सर्वत्रैष व्यतिक्रमः ॥ ७१ ॥

In the case of women, the tortoise faces upward, and in the case of men it faces downward. Thus, the differences (in the arrangement of arteries) obtain between men and women, owing to the reversal of the position of the tortoise.

72.

लक्ष्यते दक्षिणे पुंसां या च नाडीविचक्षणैः ।

कूर्मभेदेन वामानां वामे चैवावलोक्यते ॥ ७२ ॥

It is owing to the different positions of the tortoise that the pulse in the right hand is to be examined in the case of male (patients), and the pulse in the left hand in the case of female (patients).

VII. NĀDI-NAKSHATRA-MĀLĀ (ascribed to Asvini-deva) with Krishna Suri's gloss

1.

अङ्गुष्ठमूलमाश्रित्य चाङ्गुलत्रयमात्रका ।

यवबीजप्रमाणेन नाडी सर्वाङ्गसङ्गाः ॥ १ ॥

सर्वाङ्गसङ्गानि सर्वस्मिन्नङ्गे सङ्गतिः सम्बन्धः व्यापनरूपं यस्या सा तथोक्ता नाडी अङ्गुष्ठमूलमाश्रित्यं हस्ताङ्गुष्ठमूलभू कूर्पर प्रदेशमवलम्ब्य स्थिता सती अङ्गुलत्रयपरिमितप्रदेशमनुसृत्य अनामिकादि प्रसारिणी यवबीज प्रमाणेन यवबीजसदृशप्रमाणेन शोध्यताम् इत्यर्थः ॥

— Situated below the thumb (on the wrist), of the size of a barley seed, the nāḍī is connected with all the limbs of the body; it could be discerned by the three fingers (the forefinger, the middle finger and the ring finger of the physician).

2.

वातपित्तद्वयस्याद्योर्मध्ये कफगतिर्भवेत् ।

इयं नाडी तथाश्चर्या विज्ञेया वैद्यपारगैः ॥ २ ॥

तादृश नाड्याः वात-श्लेष्म-पित्तरूपेण त्रिधा भेदमभिन्ने क्रमेण ताः लक्षयति, वातेति ।

अद्योनामिकातर्जन्योः वात-पित्तद्वयस्य गतिरर्थो भवेत् कोर्थः । यथा अनामिकायां नाडीगतिः तादृश नाडी वातनाडी यथा तस्यां नाडीगतिः तादृशनाडी पैत्यनाडी । द्वयस्य लक्ष ज्ञातव्ये इत्थं चानामिकावृत्तित्वे सति नाडीत्वं वातनाड्याः लक्षा तर्जनावृत्तित्वे सति नाडीत्वं पित्तनाड्यश्च लक्षणम् । परस्परं-व्याप्यं त्वर्थं सत्यत्रनीवेलः तर्जन्याः आदिमत्वं च अङ्गुष्ठमूलं दृष्ट्वा वश्यं तिचोत्तरं श्लोके 'मूलं च वहते पित्तं' इति ॥

मध्ये मध्यमायाः यथा नाडी भवेत् सा कफगतिः । इत्थं मध्यमावृत्तित्वे सति नाडीत्वं कफनाड्या लक्षणमिति वेदितव्यम् । इयं नाडी तथा तेन प्रकारेण आश्चर्यसंज्ञिकेति वैद्यपारगैर्विज्ञेया निर्धार्या । मध्यमायां या नाडी तस्याः कफसंज्ञा वाश्चर्यसंज्ञा प्यस्तीत्यर्थः । आश्चर्यत्वं च मध्यास्थित कफस्योपरि वात-पित्तद्वयस्य परस्पराभिसरणदशायां कफनाडी मस्पृष्टैव वर्तिष्य माणत्वादन्वर्थसंज्ञा चेयं धन्वन्तरिकृतौ द्रष्टव्या ॥ २ ॥

The course of kapha is indicated in between the two courses of vāta and pitta (apprehended by the ring-finger and the fore-

finger respectively). This course is also known as 'wonderful' to the master physicians (for when the other two courses are drawn towards each other above this course, the course remains altogether untouched).

3.

तर्जन्यां पित्तनाडी च कफनाडी च मध्यमे ।

अनामिकायां वातनाडी वर्तते नरजन्मनाम् ॥

पूर्वश्लोकेनैव वातादि नाड्याश्चज्ञानस्य साध्यत्वेपि शिष्यबुद्धि-
वेशद्यार्थं विविच्य वातादि नाडांस्थानानि ज्ञापयति 'तर्जन्यां' इति ।

सर्वत्र सप्तम्याः आश्रयत्वं, तर्जन्यां पित्तनाडी ।

पित्तनाड्यश्च यभूता तर्जनीत्यर्थः । एवमेवोत्तरत्रापि ज्ञातव्यं
मध्यमे मध्यमाङ्गुलवित्यर्थः । नरजन्मनां मनुष्याणामेव
एवंविधानाडी निर्धार्या, वतिरिक्तजन्तूनामिति भावः ॥ ३ ॥

Among the human beings, the course of pitta is situated in (viz. apprehended by) the forefinger, the course of kapha in the middle finger, and the course of vāta in the ring-finger.

4.

मूले च वहते पित्तं मध्यमे च वहते कफः ।

अन्त्रे च वहते वायुर्वैद्यशास्त्रस्य निश्चयम् ॥ ४ ॥

पूर्वं वातनाड्याः आदिमत्वं, पित्तनाड्याः अन्तिमत्वं च नाडी
सरदृष्ट्या निरूपितम् । इदानीं त्वङ्गुलमूलदृष्ट्या पित्तनाड्या
आदिमत्वं वातनाड्याश्चरमत्वं च व्यवस्थापयति 'मूल'ति ॥

मूलति वैद्यशास्त्रस्य वैद्यशास्त्र प्रतिपाद्यधातुपरीश्रणस्य
लक्षज्ञातव्यमित्यर्थः ॥

Or, considered with reference to the bottom of the thumb the initial course is that of pitta, and the intermediary course that of kapha and the final course that of vāta. This is the ascertainment of the medical science.

5.

आदौ वायुः कफो मध्ये अन्ते पैत्यं च वर्तते ।

सर्वनाडीक्रमादुद्ग्राह्यं वैद्यशास्त्रस्य लक्षणम् (?) ॥

५ ॥

रोगपरीक्षार्थं धातुनिर्धारणदशयास्तु अनामिकादि क्रमेणैप्रक्षित
व्यभिच्यभिप्रेत्याह 'आदा' विति ॥

सर्वं सुगमम् ॥

Or (while investigating the disease for ascertaining the errant dhātu), the first to be apprehended is the course of vāta, then the course of kapha, and lastly the course of pitta. Thus is to be understood from the entire order of the courses as determined in the medical science.

6-7.

वर्षाभूः शुककाकलावुकगतं पैत्यं जवं वर्तते ।

मायूरेभसुहसंकुक्कुटगतिः श्लेष्मः स्थिरो वर्तते ॥

६ ॥

कूर्मव्यालजलूकमीनगमनांदोलो मरुद्वर्तते ।

इत्येवे त्रिविधा विशेषचलना नाडीबुधैर्ग्राह्यतम् ॥

७ ॥

वातादि नाडीनां विशेष स्वाभाविकगतिमाह वर्षाभूरिति ॥

वर्षाभूर्मण्डूकः । शुकः प्रसिद्धः । काकश्च । लावुकः

तित्तिरिः (आन्ध्रभाषायां तीतुव) । तेषां गतं गमनं । भावेक्तः ।

तद्ग मनसदशविशिष्टं । अत एव, वेगवत् ।

विधेतप्राधान्यान्पुंसकलिङ्गता । 'जवो वेगिनि वेगे च' इति
विश्वः । एवं विधं सत् पैत्यं वर्तते, प्रसरति ॥

मायूर एव मयूरः । दूभः गजः । हंसः मरालः ।

कुक्कुटस्ताम्रचूडः तेषां गतिरिव गतिर्यस्या स्यात् तथाविधः । अत
एवं स्थिरः मन्दप्रकारः श्लेष्माः कफनाडी वर्तते ॥

कूर्मः कमठः । व्यालः कृष्णसर्पविशेषः । जलूकः रक्तपाः
(आन्ध्रभाषायां जलग) । बहुवचननियमस्तु स्थानपक्ष एव
नाकारान्तपक्षे । 'रक्तपास्तु जलूकायां स्त्रियांश्चि जलैकसः' इत्यमर
कोशदर्शनात् । ततः स्त्रियाः पुंवदित्यादिना पुंवद्भावविवक्षायां
जलैक इति समासे पुल्लिङ्गता । मीनः मत्स्यः । तेषां गमनमिव
गमनं यस्य तथोक्तः । अत एव वक्तः दोलान्दोलनवत् कुटिलगतिः
मरुद्वानाडी वर्तते ॥

इत्येवरूपेण त्रिविधा विशेषचलना तिस्रोविधाः प्रकारास्तसां
विशिष्टैश्चलतीति । तथोक्तः इतिशब्दः विशेषपद विशेषणं वा ।
एवंविधा नाडी बुधैर्धातुनिर्धारणसमर्थैः ग्राह्यतां ज्ञानविषयीक्रियतां
इत्यर्थः ॥

The course of pitta is swift, like the movement of a frog, a parrot, a crow, or bird called *tittiri*. The course of kapha is slow and firm, like the gait of a peacock, an elephant, a swan, or a cock. The course of vāta is undulatory, like the movement of a tortoise,

a cobra, a leech, or a fish. These are the three kinds of specific movements, known to the experts of the nāḍī-science.

8.

वाताधिको भवेदन्ते मध्ये श्लेष्माधिको भवेत् ।

वाताधिको भवेदादावन्ते पित्ताधिको भवेत् ॥ ८ ॥

वातनाड्याः मनुष्याणां प्राणप्रयाणयमये स्वस्थानं विहाय अन्यस्थाने स्थित्वा प्रकुप्यतीत्याह 'वात' इति ॥

अन्ते प्राणप्रयाणसमये वातः वातनाडी अधिकः प्रकोपितो भवेत् । श्लेष्मरोगोन्नतिकाले मध्ये स्वस्थानभूतमध्माङ्गुलौ श्लेष्मः कफः अधिको भवेत् । आदौ स्वस्थानभूतानामिकायां वातः वातनाडी अधिका भवेत् । आधिक्यं च मान्द्यतिशयः । वातरोगोन्नतिसमय इति शेषः ॥ अन्ते स्वाश्रयभूत तर्जन्यां पित्ताधिकः पैत्यनाडी अधिकः स्वभावसिद्धवेगापेक्षया द्विगुणवेगो भवेत् ॥

In the moribund condition, the course of vāta becomes vitiated (viz. abandons its normal place, shifts to another place and appears dull and slow); the kapha is felt on the middle finger as very fast; vāta is felt on ring-finger as exceedingly dull; and the vitiation of the course of pitta on forefinger as twice as fast as its normal speed.

9.

नाडीत्रयां वक्रगतिः शास्त्रेस्मिन् रोग उच्यते ।

नाडीत्रयी समा स्याच्चेदरोगः शास्त्रनिश्चयम् ॥ ९ ॥

यथा नाडीत्रयी वक्रगतिः कुटिलगमनं तदा अस्मिन् शास्त्रे वैद्यके रोग इत्युच्यते । नाडीत्रयी समा अनामिकादिक्रमेण समान प्रसार स्याच्चेत् अरोगः अरोगस्वभावः शास्त्रलक्षणं शास्त्रे ज्ञापितम् ॥

When the three courses (of vāta, kapha and pitta) are irregular, the condition is said to indicate diseases; when, however, they are evenly distributed (on the three respective fingers, ring-finger, middle finger and the forefinger), the condition is said to be that of health.

10.

श्लेष्मको ब्रह्मसंज्ञः स्यात् पैत्यको विष्णुसंज्ञकः ।

वात ईश्वरसंज्ञः स्यादिति धन्वन्तरेर्मतम् ॥ १० ॥

नाडीनां ब्रह्मसंज्ञासाह श्लेष्म इति । श्लेष्म इति श्लेष्मकः कफनाडी ब्रह्मसंज्ञ ब्रह्मेति परिभाषितः स्यात् । एममेवोत्तरत्रपि द्रष्टव्यम् ॥ ११ ॥

The course of śleshma (viz. kapha) is symbolized by Brahma, the course of pitta by Vishṇu, and the course of vāta by Śiva this is the view of Dhanvantari.

11.

ब्रह्मनाड्यां हंसगतावीश्वरो वैष्णवं स्पृशेत् ।

त्रिनाड्यो वक्रगतयो वातपित्तस्य लक्षणम् ॥ ११ ॥

ब्रह्मनाड्यां कफनाड्यां हंसगतौ मन्दगतौ सत्यां इत्यर्थः । ईश्वर वातनाडी वैष्णवं पैत्यनाडी स्पृशेच्च, यदि त्रिनाड्यो वक्रगतयः भवेच्चेत् वातपित्तस्य लक्षणम् । इयमेव तीव्रगतिश्चेत् वातपित्तस्यज्वरस्य लक्षणम् । सैव मन्दा चेत अन्तर्गतज्वरस्य लक्षणमिति वेदितव्यम् ॥

The course of kapha (symbolized by Brahmā), resembles the gait of a swan (viz. slow), and when the course of vāta (Śiva) touches the course of pitta (Vishṇu), and the three courses are irregular separately, then the disorder of vāta-pitta is indicated.

12.

ब्रह्मनाड्यां हंसगतौ विष्णुरीश्वरकं स्पृशेत् ।

त्रिनाड्यो वक्रगतयः पित्तवायोश्च लक्षणम् ॥ १२ ॥

ब्रह्मनाड्यां श्लेष्मनाड्यां हंसगतौ सत्यां विष्णुः पैत्यनाडी ईश्वरकं वातनाडीं स्पृशेत्, चेत, त्रिनाड्यो वक्रगतयश्चेत् पित्तवायोर्लक्षणम् । इयमेव तीव्रा चेत पैत्यवायुज्वरस्य, मन्दा चेत तदन्तर्गतज्वरस्यापि लक्षणमिति ज्ञातव्यम् ॥

When the course of kapha (Brahmā) is akin to the gait of a swan (viz. slow), and the course of pitta (Vishṇu) touches the course of vāta (Śiva), thus the three courses are irregular separately, then the disorder of pitta-vāta is indicated.

13.

तमोनाड्यां कूर्मगतौ सात्त्विकं राजसः स्पृशेत् ।

त्रिनाड्यो वक्रगतयः श्लेष्मपित्तस्य

लक्षणम् ॥ १३ ॥

तमोनाड्यां ईश्वरस्य तमःस्वरूपत्वात् वातनाड्यां इत्यर्थः । कूर्मगतौ । वक्रगतौ । सत्यां राजसः रजोगुणस्वरूपकब्रह्मसंज्ञक कफनाडी सात्त्विकं शुद्धस्वरूपविष्णुसंज्ञिकपैत्यनाडीं स्पृशेत्, त्रिनाड्यो वक्रगतयश्चेत् श्लेष्मपित्तस्य-लक्षणम् । इयमेव तीव्रा चेत् श्लेष्मपित्तज्वरस्य, मन्दा चेत् तदन्तर्गतस्यापि लक्षणं बोद्धव्यम् ॥

If course of vāta (symbolized by Śiva, whose attribute is *tamas*), resembles the gait of a tortoise (viz. crooked), and the course of kapha (symbolized by Brahmā, whose attribute is *rajas*) touches the course of pitta (symbolized by Vishṇu, whose attribute is *sattva*), and the three courses are thus irregular separately, then the disorder of kapha-pitta is indicated.

14.

मृतनाड्यां मन्दगतावर्धको जीवकं स्पृशेत् ।

त्रिनाड्यो वक्रगतयः पित्तश्लेष्मस्य लक्षणम् ॥ १४ ॥

त्रिनाड्यां वातनाड्यां मन्दगतौ सत्यां अर्धकः पैत्यनाडी जीवकं कफनाडीं स्पृशेत्, त्रिनाड्यो वक्रगतयश्चेत् पित्तश्लेष्मस्य लक्षणम् । तत्र तीव्रमन्दगतयोः पित्तश्लेष्मज्वरस्य तदन्तर्गतस्यापि लक्षणं ज्ञातव्यम् ।

एवंच वातश्लेष्मपित्तानां यथाक्रमं मृतजीवार्धक जीवकसंज्ञा अपि निवृत्ताविति फलितार्थः । तत्र वातपैत्यनाड्योः पार्श्वभागदि चलने सति व्याधेः किंचिद् दुस्साध्यत्वं, श्लेष्मनाड्यास्तथा चलने आमयस्यासाध्यत्वमेवेति भावः ॥

If the course of vāta (called 'the deed' course *mṛta*), moves very sluggishly, the course of pitta (called *ardhaka*) touches the course of kapha (called 'the enlivening' course or *jīvikā*) and when three courses are irregular separately, then the disorder of pitta-kapha is indicated.

15.

विष्णुनाड्यां मन्दगता वीश्वरं ब्रह्म संस्पृशेत् ।

त्रिनाड्यो वक्रगतयः श्लेष्मवायोश्च लक्षणम् ॥ १५ ॥

विष्णुनाड्यां पैत्यनाड्यां मन्दगतौ सत्यां ब्रह्मा श्लेष्मनाडी ईश्वरं वातनाडीं स्पृशेत्, त्रिनाड्यः वक्रगतयश्चेत्, श्लेष्मवायोर्लक्षणम् ॥

श्लेष्मनाड्यां वातनाडी स्पर्शगतिसाधारणा चेत् श्लेष्मवायुः तीव्रा चेत् तज्ज्वरः, मन्दा चेत् तदन्तर्गतश्चेति तात्पर्यम् ।

The course of pitta (Vishṇu) being sluggish, the course of kapha (Brahmā) touching the course of vāta (Śiva), and the three courses are irregular separately, then the disorder of kapha-vāta is indicated.

16.

अर्धनाड्यां मन्दगतौ मृतको जीवकं स्पृशेत् ।

त्रिनाड्यो वक्रगतयो वातश्लेष्मस्य लक्षणम् ॥ १६ ॥

अर्धनाड्यां अर्धक संज्ञक पित्तनाड्यां इत्यर्थः ।

तस्यां मन्दगतौ सत्यां । मृतकः वातनाडी जीवकं श्लेष्मनाडीं स्पृशेत्, त्रिनाड्यः वक्रगतयश्चेत् वातश्लेष्मस्य लक्षणम् ॥

गतिश्चेयं तीव्रा चेत् वातश्लेष्मज्वरः, मन्दा चेत् तदन्तर्गतज्वरः इति मन्तव्यम् ॥

The course of pitta (called *ardhaka*) being sluggish, when the course of vāta (called *mṛtaka*) touches the course of kapha (called *jīvikā*), and when the three courses are irregular separately, then the disorder of vāta-kapha is indicated.

17.

ब्रह्मविष्णोर्मन्दगतयो रूद्रनाडीगतिः स्फुटा ।

त्रिनाड्यो वक्रगतयो विज्ञेयं वातनाडिकम् ॥ १७ ॥

ब्रह्मविष्णोः श्लेष्मपैत्यनाडयोर्मन्दगतयोः

सत्योः रूद्रनाड्याः वातनाड्याः गतिः स्फुटा चेत् त्रिनाड्यो वक्रगतयश्चेत्, वातनाडिकं शुद्धवातनाडी विज्ञेयम् ॥

गतिरस्यास्तीव्रा चेत् कैवलवातज्वरः मन्दा चेत् तदन्तर्गतश्चेत्यभिज्ञेयम् ॥

The courses of kapha (Brahmā) and pitta (Vishṇu) being sluggish, and the course of vāta (Śiva) being clear, and when the three courses are irregular separately, then the disorder of vāta is indicated.

18.

रूद्रविष्णोर्मन्दगत्योः ब्रह्मनाडीगतिः स्फुटा ।
त्रिनाड्यो वक्रगतयः विज्ञेयं श्लेष्मलक्षणम् ॥

रूद्रविष्णवोः वातपित्तनाड्योर्मन्दत्योः सत्योः । ब्रह्मनाडीगतिः
श्लेष्मनाडीसञ्चारः स्फुटा चेत् । त्रिनाड्यो वक्रगतयश्चेत्
श्लेष्मलक्षणम् शुद्ध-श्लेष्मव्याधिस्वरूपनिर्मिति विज्ञेयम् ॥ १८ ॥

If the courses of vāta (Śiva) and pitta (Viṣṇu) are sluggish, and the course of kapha (Brahmā) is clear, and when the three courses are irregular separately, then the disorder of kapha is indicated.

19.

ब्रह्मरूद्रौ मन्दगती विष्णुनाडीगतिः स्फुटा ।
त्रिनाड्यो वक्रगतयः पित्तनाड्यास्तु लक्षणम् ॥ १९ ॥

ब्रह्मरूद्रौ मन्दगती श्लेष्मवातनाड्यौ मन्दगती चेत् ।
विष्णुनाडीगतिः पैत्यनाडीप्रचारः स्फुटा चेत् । त्रिनाड्यो
वक्रगतयश्चेत्, पित्तनाड्याः पित्त नाडीमूलक केवल पैत्यरोगस्य
स्वरूपमिति बोद्धव्यम् ।

गतिस्तस्याः तीक्ष्णत्वे शुद्धपैतज्वरः । मन्दगतिश्चेत्
तदन्तर्गतश्चेत्यभिप्रायः ॥

The courses of kapha (Brahmā) and vāta (Śiva) being sluggish the course of pitta (Viṣṇu) being clear, and when the three courses are irregular separately, then the disorder of pitta is indicated.

20.

त्रिनाड्यो वक्रगतयस्त्रिनाडीगतयः समाः ।
त्रिनाड्यो मन्दगतयस्त्रिनाडीगतयो जवाः ॥ २० ॥

एकस्मिन् क्षणे त्रिनाड्यः वातश्लेष्मपित्तनाड्यः वक्रगतयः
कुटिलप्रचारः, अपरस्मिन् क्षणे त्रिनाडीगतयः समाः
वातश्लेष्मपित्तनाड्यः समानप्रचाराः, अन्यस्मिन् क्षणे त्रिनाड्यो
वातश्लेष्मपित्तनाड्यः मन्दगतयः गत्या मन्दप्रचाराः तदुत्तरक्षणे
त्रिनाडीगतयः जवाश्च भवेयुश्चेत् कोऽर्थः? उक्तवक्रगत्यादि
क्रममुल्लङ्घ्यैव पूर्वस्मिन् क्षणे वक्रगतिः समगति मन्दगति
जवगतिर्वा भवति, उत्तरक्षणे तृतीये वक्रा जवगतिर्वा भवेत्
चतुर्थक्षणे सममन्दा मन्दसमा वा भवेत्, एवंरूपेण नाडीत्रय्याः
सङ्कलने विषमसङ्कलितनाडीज्वरश्चेति मन्तव्यम् ॥

When the three courses are irregular separately (in one moment), uniform (in the second moment), sluggish (in the third), and rapid (in the fourth), the disorder known as a complex of irregular courses (*vishama-sankalita-nāḍī*) is indicated.

21.

मुहुर्लवगतिः पित्तो मुहुर्भेकगतिस्तथा ।
द्वात्रिंशोऽपि संप्राप्ता मुहुः शुकगतिः शिवः ॥ २१ ॥

पैत्यनाडी लावुकगतिः । मुहुरित्यत्र सर्वत्र
वीप्सा ग्राह्या मुहुर्मुहुः । तित्तिरिर्गतसदृशगतिश्चेत् । पित्तः
पैत्यनाडी वा मुहुर्मुहुः भेकगतिः मण्डुकप्लुतिः
मण्डुककण्ठनाडीचलन सहशगतिर्वा भवेयुश्चेत् । शिवः वातनाडी
वा मुहुर्मुहुः शुकगतिश्च स्याच्चेत् द्वात्रिंशोऽपि जिह्वादोषादिचिन्तामणि
निवाहटादिग्रन्थप्रतिपादितदोषाः संप्राप्ता भवेयुरिति भानः ॥

When the course of pitta is again and again like the gait of the tittirī bird, or like the manner of the frog's movement, or when the course of vāta resembles the gait of the parrot, then thirty-two disorders are indicated.

22.

मुहुर्मन्दगतिर्ब्रह्मा मुहुर्जवगतिः शिवः ।
मुहुर्जवगतिर्विष्णुः सूतिकावायुलक्षणम् ॥ २२ ॥

अत्रापि मुहुपदेन वीप्सा ग्राह्या । ब्रह्मा श्लेष्मनाडी मुहुर्मुहुः
मन्दगतिः स्याच्चेत् । शिवः वातनाडी च मुहुर्मुहुः जवगतिः
वक्रगतिश्च । यदि पित्तनाडी मुहुर्मुहुः तीव्रगतिर्वा स्यात्
सूतिकावायोः सूतिकाविमितक वायोर्लक्षणं स्वरूपमिति
निर्धायम् ॥

पैतवायोरेव सूतिकावायोरुत्तिरिति रत्नाकर वाहटग्रन्थादिषु
द्रष्टव्यम् ॥

While the course of kapha is frequently sluggish, the course of vāta is likewise frequently rapid (and irregular), and the course of pitta too frequently rapid, then the presence of *sūtikā-vāyu* is indicated.

23.

जववक्रास्त्रिनाड्यश्च मन्दवक्रास्त्रिनाडिकाः ।

एकश्लेष्मा वक्रगतिः ज्वरान्तर्गतितरस्थिगः ॥ २३ ॥

त्रिनाड्यः वातश्लेष्मपित्तनाड्यः जववक्राः

तीव्रकुटिलाश्चेत् । ज्वरः शरीरबाह्यसन्तापकृत बाह्यज्वर इत्यर्थः ।

त्रिनाडिकाः मन्दवक्राः मन्दप्रकारेण कुटिलगतयश्चेत् । अन्तर्गतिः

अन्तर्गतज्वर इत्यर्थः वातपित्तनाड्यो स्वाभाविकगत्योरेव श्लेष्मः

एक एव मन्दप्रकारेण वक्रगतिश्चेत् । मय्यमाङ्गुलिमधिष्ठित्यैव

तामेवेतस्ततः ताडयेच्चेत् । अस्थिगः आस्थि

यावच्छरीराधरकपृष्ठभागावस्थित बृहच्छल्यविशेषः ।

तद्गच्छतीत्यस्थिगः अस्थिगतज्वर इत्यर्थः । अन्तर्गतितरस्थिगः

अन्तः शरीरान्तः गच्छतीति सूक्ष्माकारेणाप्रोतीत्यर्थः ॥

When the three courses are rapid and irregular, 'external fever' is indicated; when, however, the three courses are sluggish and irregular, 'internal fever' is suggested. When two courses (vāta and pitta) move normally, but the course of kapha is sluggish and irregular, the fever is said to have entered the bone.

24.

अनिलो याति पित्तस्य पित्तो याति कफालयम् ।

कफस्य कण्ठमाला या न भवेत्तस्य जीवनम् ॥ २४ ॥

अनिलः वातनाडी । पित्तस्य पैत्यनाडेः स्थानमिति शेषः ।

याति गच्छति । यदि पित्तः पैत्यनाडी च कफालयं श्लेष्मस्थानं याति

प्राप्नोति । यदि यस्य पुंसः या प्राप्तिः कफालयः पित्तनाडी कफस्य

श्लेष्मनाड्याः । कण्ठमाला कण्ठमालावत् श्लेष्मय वर्यं तिष्ठन्ती

भवेत् । तस्य जीवितमपि न भवेत् न स्थास्यति ॥

The person, whose course of vāta strays into the position of the course of pitta, the course of pitta shifts to the position of the kapha, and the course of kapha settles like a garland around the neck, he will not live.

25-26.

मन्दं मन्दं शिथिलाशिथिलं व्याकुलं व्याकुलं वा ।

स्थित्वा स्थित्वा त्वरितगमनं पञ्च सूक्ष्म गदानाम् ॥ २५ ॥

एवं नाडी त्रिविधगतयो यस्य हस्ते पदे वा ।

दृश्यन्तेऽमी जगति न भवेत्तस्य जीवाभिलाषः ॥ २६ ॥

मन्दं मन्दं मन्दप्रकारं सर्वत्र प्रकारे गुणवचनस्येति द्विर्भावम् ।

शिथिल शिथिल निवातनिर्मोकवत् शिथिलप्रकारसंचारं ।

व्याकुलं व्याकुलं वा संशयजनकत्वेन स्थित्वा स्थित्वा

स्ववेगाभावात् अदर्शनीयतया क्षणं क्षणमंतस्थानं ।

त्वरितगमनं उत्प्लुत्योत्प्लुत्य धावदक्षगतिवत् शीघ्रगमनं ॥

एवंरूपा पंचारवस्थाः नाडीनां सम्पयेयुश्चेत् । गदानां

रोगाणां अनस्थानमिति शेषः । तत् सूक्ष्मं सूक्ष्मतया वि

एवंप्रकारेण अमी पूर्वोक्ता नाडीत्रिविधगतयः

त्रिविधनाडीप्रचार इत्यर्थः । ताः यस्य पुंसः हस्ते पदे वा

दृश्यन्ते । तस्य जगति अस्मिन् लोके जीवाभिलाषः अयं

जीविष्यतीत्यभिलाषः न भवेत् ॥

The condition of the diseases must be carefully and minutely observed through the five-fold movements of the three courses: exceedingly sluggish, broken, troubled, halting and rapid. If the three courses are noticed as above at the hand, or at the foot, then the patient is not likely to survive.

27.

सुव्यक्तता निर्मलत्वं स्वस्थानस्थितिरिव च ।

अचञ्चलमन्दत्वं सर्वेषां शुभलक्षणम् ॥ २७ ॥

सुव्यक्तता सुष्ठु स्फुटत्वेन भासमानतां निर्मलत्वं दोषराहित्य स्थाने वृत्तिः ॥

अचञ्चलमित्यत्र भावप्रभावनिर्देशः । चाञ्चल्यभावः ।

अमन्दत्वं मन्द्यातिशयाभावः । एतत्सर्वं सर्वेषां रोगाणां

शुभलक्षणं साध्यत्वरूपशोभनं ज्ञापकम् ॥

इति सातुलूरिवंशपयःपारावारकासुधाकरायमानस्य

श्रीमद्गोपालाचार्यसूरेस्तनूजेन श्रीकृष्णसूरिणा विरचिता

नाडीनिरूपणाख्याश्विनीदेवकृत सप्तविंशतिश्लोकीव्याख्या

समाप्ताभूत् ॥

If the courses are clear, free from defects, firm in their own positions, unswerving and non-sluggish then the prognosis is good.

VIII. Excerpts from YOGARATNAKARA Eight-fold Examination.

The details of pulse-examination are given in verses 35 to 84, followed by other examinations such as urine, faeces etc. (verses 85 to 141).

35.

रोगाक्रान्तशरीरस्य स्थानान्यष्टौ निरीक्षयेत् ।
नाडी मूत्रं मलं जिह्वां शब्दं स्पर्शां दृगाकृती॥ ३५ ॥

The patient's body, stricken with disease, must be examined with regard to eight aspects: pulse, urine, faeces, tongue, sound, touch, sight and appearance.

36.

दोषकोपे घनेत्ये च पूर्वं नाडीं परीक्ष्य च ।
अन्ते चादौ स्थितिस्तस्या विज्ञेया भिषजा स्फुटम्॥ ३६ ॥

The aggravation or diminution of the doshas must be ascertained by the physician preliminarily by pulse-examination.

37.

यथा वीणागता तन्त्री सर्वान् रागान् प्रभाषते ।
तथा हस्तगता नाडी सर्वान् रोगान् प्रभाषते॥ ३७ ॥

Even as the strings of a lute articulate all the melodies, the pulse of the hands (viz. the radial artery) reveal all the diseases.

38.

सर्वेषामेव रोगाणां निदानं कुपिता मलाः ।
तत्प्रकोपस्य तु प्रोक्तं विविधाहितसेवनम्॥ ३८ ॥

Aggravated malas (i.e. doshas) are responsible for all diseases, and the aggravation is caused by unwholesome food and conduct.

40.

आदौ सर्वेषु रोगेषु नाडीजिह्वाक्षिमूत्रतः ।
परीक्षां कारयेद्द्वैद्यैः पश्चाद्रोगं चिकित्सयेत्॥ ४० ॥

In all diseases, the physician must first examine the pulse, the tongue and the urine of the patient, and then determine the line of treatment.

41.

नाड्या मूत्रस्य जिह्वायाः लक्षणं यो न विन्दति ।
मारयत्याशु वै जन्तुं स वैद्यो न यशो भजेत्॥ ४१ ॥

The physician who does not understand the significance of pulse, urine or tongue will only kill the patient (with his treatment); he will never acquire celebrity.

42.

लक्षयित्वा देशकालौ ज्ञात्वा रोगबलाबलम् ।
चिकित्सामारभेद् वैद्यो यशः कीर्तिमवाप्नुयात्॥ ४२ ॥

The physician must commence the treatment after duly considering the place where the patient is residing, the time of the year, and the severity of the disease; only then will he obtain celebrity.

43.

नाडीमङ्गलमूलाधः स्पृशेदक्षिणके करे ।
ज्ञानार्थं रोगिणो वैद्यो निजदक्षिणपाणिना॥ ४३ ॥

The physician, in order to understand the disease, must, with his right hand, feel the pulse that is located at the bottom of the thumb of the patient's right hand (i.e. if the patient is male).

44.

स्थिरचित्तः प्रशान्तात्मा मनसा च विशारदः ।
स्पृशेद्गुलिभिर्नाडीं जानीयादक्षिणे करे॥ ४४ ॥

It is only when the physician is attentive, tranquil and clever that he will be able to understand (the significance of the patient's) pulse in the right hand, as he feels it.

45.

प्रायः स्फुटा भवति वामकरे वधूनां ।
पुंसां च दक्षिणकरे तदियं परीक्षया ।
ईषद्विनामितकरं वितताङ्गुलीकं ।
बाहुं प्रसार्य रहितं परिपीडनेन॥ ४५ ॥

The pulse generally becomes lucid in the left hand of women, and for men in the right hand. Examination must, therefore, be appropriately made. And, while the pulse is being examined, the patient's arm must be

stretched out, slightly bent, and fingers separated, and the patient must be free from any discomfort.

46.

ईषद्विनम्रकृतकूर्परवामभागे ।
हस्ते प्रसारित सदङ्गुलिसन्धिके च ।
अङ्गुष्ठमूलपरिपश्चिमभागमध्ये ।
नाडी प्रभातसमये प्रथमं परीक्ष्या ॥ ४६ ॥

The pulse must be felt at the back of the bottom of the thumb when the arm is slightly bent at the elbow towards left, and the joints of the fingers are spread out. Pulse-examination must first be made at dawn.

47.

वारत्रयं परीक्षेत धृत्वा धृत्वा विमोचयेत् ।
विमृश्य बहुधा बुध्वा रोगव्यक्तिं विनिर्दिशेत् ॥ ४७ ॥

The physician must examine the patient's pulse thrice, repeatedly exerting pressure (with his fingers) and relaxing, and must ascertain the manifestation of disease after careful deliberation, considering the many involvements therein.

48.

अङ्गुलित्रितये स्पृष्ट्वा क्रमादोषत्रयोद्धवाम् ।
मन्दां मध्यगतिं तीक्ष्णां त्रिभिदोषैस्तु लक्षयेत् ॥ ४८ ॥

The physician must employ (for pulse-examination) three of his fingers, each providing information about the mild, moderate or intense nature of a dosha.

49.

वातं पित्तं कफं द्रव्यं त्रितयं सान्निपातिकम् ।
साध्यासाध्यविवेकं च सर्वं नाडी प्रकाशयेत् ॥ ४९ ॥

The pulse will reveal (on examination) the source of the disease severally in vāta, pitta or kapha, conjointly by two of them, or

aggregately in all three of them; it will also indicate the easy curability or otherwise of the disease.

50.

स्नायुर्नाडी ततो हंसी धमनी धरणी धरा ।
तन्तुकी जीवनज्ञाना शब्दाः पर्यायवाचकाः ॥ ५० ॥

Synonymous of pulse are *snāyu* (sinew, tendon), *nāḍī* (tube), *hamsī* (female swan), *dhamanī* (artery), *dharanī* (beam of roof), *dharā* (vein), *tantukī* (cord) and *jīvana-jnāna* (gnosis of vitality).

51.

सद्यःस्नातस्य भुक्तस्य तथा स्नेहावगाहिनः ।
क्षुतृषार्तस्य सुप्तस्य नाडी सन्यङ्ग न बुध्यते ॥ ५१ ॥

The pulse does not reveal much immediately after the patient's bath, food or oil-bath, or when the patient is hungry or thirsty, or when he is asleep.

52.

अङ्गुष्ठमूलभागे या धमनी जीवसाक्षिणी ।
नच्चेष्टया सुखं दुःखं ज्ञेयं कायस्य पण्डितैः ॥ ५२ ॥

The pulse (perceptible) at the bottom of the thumb is the witness of the patient's life; it is by its movements that the wise physician understands the happiness or otherwise (viz. health or disease) of the patient.

53.

स्त्रीणां भिषग् वामहस्ते पादे वामे च यत्नतः ।
शास्त्रेण सम्प्रदायेन तथा स्वानुभवेन वै ।
परीक्षेद्रत्नवच्चासावभ्यासादेव जायते ॥ ५३ ॥

The physician must carefully examine the female patient's left hand or left foot. Pulse-examination must be done on the basis of his knowledge of the classical texts, in accordance with tradition, and according to one's own experience. It is like examining precious stones; one acquires competence by practice.

54.

वातनाडी भवेद् ब्रह्मा पित्तनाडी च शङ्करः ।
श्लेष्मनाडी भवेद्विष्णुस्त्रिदेवा नाडिसंस्थिताः ॥ ५४ ॥

The pulse as it reveals vāta represents the god Brahma, the pulse as it reveals pitta Śaṅkara, and pulse as it reveals kapha Vishnu. The three gods (presiding over creation, dissolution and preservation respectively) are thus represented in the pulse.

55.

अग्रे वातहरा नाडी मध्ये वहति पित्तला ।
अन्ते श्लेष्मविकारेण नाडी ज्ञेया बुधैः सह ॥ ५५ ॥

The pulse must always be known to be carrying the disorders of vāta at its beginning, the disorders of pitta in the middle and the disorders of kapha at the end.

56-57.

सर्पजलौकादिगतिं वदन्ति विबुधाः प्रभञ्जने नाडी ।
पित्तेन काकलावकमण्डूकादेस्तथा चपलाम् ॥ ५६ ॥
राजहंस मयूराणां पारावत कपोतयोः ।
कुक्कुटस्य गतिं धत्ते धमनी कफसंगिनी ॥ ५७ ॥

The wise inform us that in disorders of vāta, the pulse (is perceived to assume) the gait of a snake, a leech and so on; in disorders of pitta, the pulse (moves) unsteadily like a crow, quail, or a frog; and in disorders of kapha (the movement resembles) the gait of a royal swan, a peacock, a turtle-dove, or a pigeon.

58.

मुहुः सर्पगतिं नाडीं मुहुर्भेकगतिं तथा ।
वातपित्तसमुद्भूतां तां वदन्ति विचक्षणाः ॥ ५८ ॥

When the pulse articulates now like a snake (crawling), and now like a frog (hopping), it indicates the disease arising from the disorders of both vāta and pitta.

59.

सर्पहंसगतिं तद्वत् वातश्लेष्मवर्ती वदेत् ।
हरिहंसगतिं धत्ते पित्तश्लेष्मान्विता धरा ॥ ५९ ॥

Likewise, when the pulse articulates now like a snake, and now like a swan, then the disease involving the disorders of both vāta and sleshma (kapha) is indicated; when the pulse assumes now the gait of a frog and now the gait of a swan, then the disease involving the disorders of both pitta and sleshma is indicated.

60.

काष्ठकुट्टो यथा काष्ठं कुट्टते चालिवेगतः ।
स्थित्वा स्थित्वा तथा नाडी सन्निपाते भवेद् ध्रुवम् ॥ ६० ॥

When the pulse articulates like an woodpecker, which pecks in great speed at the wood, halting repeatedly, then the disease caused by the disorders of all three doshas together is indicated.

61-62.

स्पन्दते चैकमानेन त्रिशाद्वारं यदा धरा ।
स्वस्थानेन तदा नूनं रोगी जीवति नान्यथा ॥
स्थित्वा स्थित्वा वहति या सा ज्ञेया प्राणघातिनी ॥ ६१-६२ ॥

When the pulse articulates thirty times, stationed appropriately and in uniform measure, it indicates that the life of the patient is surely not endangered; otherwise, the patient is not likely to survive. The pulse that articulates with repeated intermissions forebodes the patient's death.

63.

मन्दं मन्दं शिथिलशिथिलं व्याकुलं वा ।
स्थित्वा वहति धमनी याति सूक्ष्मा च सूक्ष्मा ।
नित्यं स्कन्धे स्फुरति पुनरप्यंगुलीः संस्पृशेद्वा ।
भावेरषं बहुविधैतरैः सन्निपातादसाध्या ॥
तस्य मृत्युं विजानीयाद्यस्यैदं नाड्यलक्षणम् ॥ ६३ ॥

If the pulse articulates in an exceedingly sluggish, fragile, dispersed or halting manner, or is felt as imperceptibly subtle

or almost so, or is felt as moving always at the (source of the) shoulders and touching the fingers now and then, thus manifesting many modes, then the disease caused by the disorders of all three diseases together is suggested, and it forebodes the patient's death.

64.

पूर्व पितागतिं प्रभञ्जनगतिं श्लेष्माविभ्रती ।
मृत्यन्ते भ्रमणं सुहृदिदधतीं चक्राधिरुद्धामिव ।
भीष्मत्वं कलापिगतिकां सूक्ष्मत्वमातन्वतीम् ।
नी साध्यधमनीं वदन्ति मुनयो नाडीगतिज्ञानिनः॥ ६४ ॥

The sages well-acquainted with the articulations of the pulse say that the pulse which assumes first the pitta, then the vāta and finally the sleshma (kapha) characteristics; which moves about frequently and intensely, like one poised over a turning wheel; which moves like a peacock and with ferocity; and which increasingly becomes faint and imperceptible, suggests that the disease is incurable.

65.

गभीर या भवेन्नाडी या भवेन्मासवाहिनी ।
या च सूक्ष्म च वक्रा च तामसाध्यां विदुर्बुधाः॥ ६५ ॥

The pulse that is deep (or all too steady), fleshy (or hard like the pulse of a non-vegetarian), imperceptible or crooked suggests the incurability of disease.

66.

ज्वरवेगेन धमनी सोष्णा वेगवती भवेत् ।
कामक्रोधाद्वेगवहा क्षीणा चिन्ताभयप्लुता॥ ६६ ॥

The pulse becomes warm and rapid, owing to fever. It articulates fast under the pressure of lust or anger, and appears impoverished in condition of worry and fear.

67

मन्दग्रेः क्षीणधातोश्च नाडी मन्दतरा भवेत् ।
असृक्पूर्णा भवेत्सोष्णा गुर्वी सामा गरीयसी॥ ६७ ॥

When the power of digestion is weak, and when the vital energy is poor, the pulse becomes exceedingly slow. The pulse that is filled with blood is felt warm; and the presence of improperly digested food in the body makes the pulse heavy.

68.

लघ्वी वहति दीप्तायिस्तथा वेगवती भवेत् ।
सुखितस्य स्थिरा ज्ञया तथा बलवती मता ।
चपलाक्षुधितस्यापि तृप्तस्य वहति स्थिरा॥ ६८ ॥

The pulse of one whose power of digestion is abnormally intense moves light and rapidly. The pulse of a healthy person will be steady and powerful. The pulse in hunger will be unsteady, but after satisfying food becomes steady.

69.

मरणे डमरुकस्य भवेदेकदिनेन च ।
कम्पते स्पन्दतेत्यन्तं पुनःस्पृशति चाङ्गुलीः ।
तामसाध्यां विजानीयान्नाडीं दूरेणा वर्जयेत्॥ ६९ ॥

The pulse that articulates like a hand-drum forebodes death for the patient within a day. The pulse that appears exceedingly agitated, vibrates rapidly, and strikes at times the fingers indicates that the disease is incurable; the case must be abandoned.

70.

स्थिरा नाडी भवेद्यस्य विद्युतिरिवेक्ष्यते ।
दिनैकं जीवितं तस्य द्वितीये मृत्युवेव च॥ ७० ॥

The patient, whose pulse is all too steady and is felt like the flash of lightning, will survive but for a day; he will die the next day.

71.

शीघ्रा नाडी मलोपेता शीतला वाथ दृश्यते ।
द्वितीये दिवसे मृत्युर्नाडी ज्ञेया विचक्षणैः॥ ७१ ॥

That the patient whose pulse moves rapidly appears to be filled with waste products (i.e. sweat), and feels cold to touch, will die during the following day is known to the wise.

72.

मुखे नाडी वहेतीव्रा कदाचिच्छीतला वहेत् ।

आयाति पिच्छलः स्वेदः सप्तरात्रं न जीवति॥ ७२ ॥

When the pulse articulates rapidly at its head (viz. the vāta-position), and at times feels cold to touch, and when sweat comes out sticky, the patient's life will not exceed seven nights.

73.

देहे शैल्यं मुखे श्वासो नाडी शीघ्रा विदाहिनी ।

मासार्धं जीवितं तस्य नाडीविज्ञानिभाषितम्॥ ७३ ॥

The patient whose body is cold, whose breathing is by the mouth and whose pulse is rapid and burning, will survive only for a fortnight — so say the experts in pulse-examination.

74.

मुखे नाडी यदा नास्ति मध्ये शैल्यं बहिःकलमः ।

यदा मन्दा भवेन्नाडी त्रिरात्रं नैव जीवति॥ ७४ ॥

When pulse at its head (viz. the vāta-position) does not appear at all, and is cold in its intermediate position (viz. the pitta-position), when there is tiredness in the exterior, and when the pulse is very slow in its articulation, the patient will not even live for three nights.

75.

अतिसूक्ष्मा च वेगा च शीतला च भवेद्यदि ।

तदा वैद्यो विजानीयाद्रोगिणं च गतायुषम्॥ ७५ ॥

When the pulse is almost imperceptible, rapid in its articulation, and cold to touch, the physician must know that the patient is about to die.

76.

विद्युद्द्रोणिना नाडी दृश्यते च न दृश्यते ।

अकालविद्युत्पातेन स गच्छेद्यमशासनम्॥ ७६ ॥

When, like a flash of lightning, the patient's pulse is now perceptible and then not perceptible, the patient will suddenly collapse, as if by an untimely thunderbolt.

77.

तिर्यगुष्णा च यन्नाडी सर्पणा वेगवत्तरा ।

कफपूरितकण्ठस्य जीवितं तस्य दुर्लभम्॥ ७७ ॥

The patient whose pulse articulates horizontally, moves quickly like unto the gait of snake, and is warm to touch, and whose throat is stuffed with phlegm, has difficulty in surviving.

78.

चेलांचलितवेगा च नासिकाधारसंयुता ।

शीतला दृश्यते या च याममध्ये च मृत्युदा॥ ७८ ॥

The patient whose pulse appears as if agitated like the end of a banner fluttering in the wind, as if filled with breath, and is cold to touch, will die within a 'watch' (duration of three hours).

79.

दृश्यते चरणे नाडी करे नैवाभिमृश्यते ।

मुखं विकसितं यस्य तं दूरं परिवर्जयेत्॥ ७९ ॥

The patient whose pulse is perceptible at the feet, but not in the hands, and whose face is swollen, must be abandoned by the physician (viz. the patient is in the moribund condition).

80.

वातपित्तकफाश्चायो यस्यां समाहिताः ।

कृच्छ्रसाध्यामसाध्यां वा प्राहुर्वैद्यविशारदाः॥ ८० ॥

The condition of disease, in which the patient's pulse shows an admixture of the three doshas, vāta, pitta and kapha, is described by expert physicians as difficult to correct.

81.

वक्रा च चपला शीतस्पर्धा वातज्वरे भवेत् ।

द्रुता च सरला दीर्घा चोष्णा पित्तज्वरे भवेत् ।

मन्दा च सुस्थिरा शीता पिच्छला श्लेष्मतो भवेत्॥ ८१ ॥

The pulse becomes crooked, agitated and cold to touch in the disease known as vāta-jvara; it becomes quick, straight and

long in pitta-jvara and it becomes slow, steady, cold to touch and slimy in kapha-jvara.

82.

वक्रा च ईषच्चपला कठिना वातपित्तजा ।
ईषच्च दृश्यते स्पष्टा मन्दा स्वाच्छ्लेष्मवातजा ।
सूक्ष्मा शीता स्थिरा नाडी पित्तश्लेष्मसमुद्भवा ॥ ८२ ॥

In conditions where vāta and pitta are out of order the pulse is crooked, slightly agitated and hard to touch. In disordered vāta and kapha, the pulse is only slightly perceptible and is slow. In disordered pitta and kapha, the pulse is imperceptibly subtle, cold to touch and unsteady.

83.

हंसगा चैव या नाडी तथैव गजगामिनी ।
मुखं प्रशस्तं च भवेत्तस्यारोग्यं भवेत्सदा ॥ ८३ ॥

The person, whose pulse moves slowly like a swan or steadily like an elephant, and whose countenance appears pleasant and wholesome, inclines to be healthy.

84.

यद्रोगिणः करं स्पृष्ट्वा स्वकरं क्षालयेद्यदि ।
रोगास्तस्य विनश्यन्ति पङ्क्तुं प्रक्षालनाद्यथा ॥ ८४ ॥

If the physician washes his hands after examining the patient's pulse, the patient's diseases will disappear, like dirt being washed away.

(a) Examination of Urine

85.

अथातः संप्रवक्ष्यामि मूत्रस्य च परीक्षणम् ।
येन विज्ञातमात्रेण रोगचिह्नं प्रकाश्यते ॥ ८५ ॥

Then is described the examination of urine, by which the symptoms of the disease are well understood.

86.

निशान्तयामे घटिकाचतुष्टये
उत्थाप्य वैद्यः किल रोगिणां च ।

मूत्रं धृतं काचमये च पात्रे
सूर्योदये तत्सततं परीक्ष्यम् ॥ ८६ ॥

The physician must wake up the patient in the last watch of the night, when there are still 4 ghaṭikas to go, and collect the patient's urine in a glass vessel; and he must examine it at sunrise.

87.

तस्याद्यधारां परिहृत्य मध्य
धारोद्भूतत्वं तत्परिधारयित्वा ।
सम्यक् परिज्ञाय गदस्य हेतुं
कुर्याच्चिकित्सां सततं हिताय ॥ ८७ ॥

While collecting the urine (the physician) must throw away the initial flow, and collect only the middle flow. The physician must carefully examine it, and ascertain the cause of disease, before commencing treatment, for that will be beneficial.

88.

वाते च पाण्डुरं मूत्रं सफेनं कफरोगिणः ।
रक्तवर्णं भवेत् पित्ते वृन्दुष्वजे मिश्रितं भवेत् ।
सन्निपाते च कृष्णं स्यादेतन्मूत्रस्य लक्षणम् ॥ ८८ ॥

In diseases due to vāta, the urine will be whitish in colour, in diseases due to kapha, it will be foamy, and in diseases due to pitta it will be reddish; in diseases caused by two doshas, it will be mixed in colour; and in diseases caused by all three doshas it will be black in colour. Thus should characteristics of urine be understood.

89-90.

परीक्षा विधिवत्कार्या रोगिमूत्रस्य तत्त्वतः ।
तुणेन दापयेत्तैलबिन्दुं तत्रातिलाघवात् ॥ ८९ ॥
विकसितं तैलमथाशु मूत्रे
साध्यः स रोगी न विकसितं चेत् ।
स्यात्कष्टसाध्यस्तलगे त्वसाध्यो
नागार्जुनैव कृता परीक्षा ॥ ९० ॥

The examination of urine must be conducted, according to textual prescription:

A drop of oil must exceedingly slowly be inserted into the vessel containing urine, with the help of a blade of grass. If the oil quickly spreads in the urine, the disease must be understood as curable (with ease). If, on the other hand, the oil does not spread, then the disease is curable with difficulty. If, however, the drop of oil descends to the bottom of the vessel, then it must be understood that the disease is incurable. This is how Nagarjuna himself used to examine.

91.

नीलं च रूक्षं कपिते च वायौ
पीतारुणं तैलसमं च पिते ।
स्निग्धं कफे कल्बलवारितुल्यम्
स्निग्धोष्णरक्तं रुधिर प्रकोपे ॥ ९१ ॥

If there has been the aggravation of vāta, the urine will be dark-blue in colour; in the aggravation of pitta, it will be yellow, pink and oily; in the aggravation of kapha, it will be slimy (dirty) like the water of a puddle. If the disease is due to the excitation of blood, the urine will be slimy, warm to touch, and reddish in colour.

92

मातुलुङ्गरसाभासं सौवीरामं जलोपमम् ।
प्रपाकरहितानां च मूत्रं चन्दनसन्निभम् ॥ ९२ ॥

The urine of the patients who are unable to properly digest the food eaten will be like the juice of a citron fruit or the colour of the fruit of the jujube, or like water, or like sandal-wood.

93

अजीर्णप्रभवे रोगे मूत्रं तण्डुलसोयवत् ।
नवज्वरे घृष्णवर्णं बहु मूत्रं प्रजायते ॥ ९३ ॥

In diseases due to indigestion, the urine will resemble the water in which rice has been washed (or the sour rice gruel), in 'new fever' the urine will assume the colour of ash and will be much (in quantity).

94

पित्तानिले धूम्रजलाभमुष्णं
धृतं मरुच्छलेष्मणि बुबुदाभम्
तच्छूलेष्मपित्ते कालुषं सरक्तं
जीर्णज्वरेऽसृक्सदृशं च पीतम् ।
स्यात् सन्निपातादपि मिश्रवर्णं
तूर्णं विधिज्ञेन विचारणीयम् ॥ ९४ ॥

In diseases due to aggravation of vāta and pitta, the urine will be ashy in colour, watery and warm; in diseases where vāta and śleshma are disturbed, the urine will be white in colour and foamy; in conditions of aggravation of śleshma and pitta, the urine will be dirty and bloody. In chronic fever (jīrṇa-jvara), the urine will appear like blood, or will display many colors. Thus the learned physician must discriminate.

95.

पूर्वाशां वर्धते बिन्दुर्यदा शीघ्रं सुखी भवेत् ।
दक्षिणाशां ज्वरो ज्ञेयस्तथारोग्यं क्रमाद्भवेत् ॥ ९५ ॥
उत्तरस्यां यदा बिन्दोः प्रसरः संप्रजायते ।
अरोगिता तदा नूनं पुरुषस्य न संशयः ।
वारुण्यां प्रसरोब्दिन्दुः सुखारोग्यं तदादिशेत् ॥ ९५ ॥

When the drop of oil inserted in the collection of urine spreads in the eastern direction, it indicates that the patient will quickly recover. When it spreads in the southern direction, it means that the patient is suffering from fever, and that he will recover in due course. If however, the drop of oil spreads to the north, it means that the person is undoubtedly healthy. If the spread is towards the west, it suggests that the patient will be happy and free from disease.

96.

ऐशान्यां वर्धते बिन्दुर्ध्रुवं मासान नश्यति ।
आग्नेय्यां तु तथा ज्ञेयं नैऋत्यां प्रसरेद्यदि ।
छिद्रितश्च भवेत्पश्चात् ध्रुवं मरणमेव च ।
वायव्यां प्रसरेब्दिन्दुः सुधयापि विनश्यति ॥ ९६ ॥

If the oil-drop spreads towards the north-east, the patient will surely die in a month's time; if it spreads towards south-east or south-west, or if it is broken into bits, it must be understood that the patient will undoubtedly die. If the drop of oil spreads in the direction of north-east, the patient will die even if ambrosia is administered to him.

97.

विकासितं हलं कूर्म सौरिभाकारसंयुतम् ।
करण्डमण्डलं वापि शिरोहीननरं तथा ॥
मात्रखण्डं च शास्त्रं च खड्गं मुसलपट्टिशम् ।
शरं च लगुडं चैव तथैव त्रिचुतः पथम् ।
बिन्दुरूपं नरो दृष्ट्वा न कुर्वीत क्रियां क्वचित् ॥ ९७ ॥

When the drop of oil inserted into the collection of urine assumes the form of a plough, of a tortoise, of a he-buffalo, of a circular casket, of a head-less human figure, of a piece torn from the body, of a weapon, of a sword, of a pestle, of an arrow, of a cudgel, or of the place where four roads meet, then the physician must refrain from any attempt to treat the patient for the patient is sure to die.

98.

हंसकारण्डताडागं कमलं गजचामरम् ।
छत्रं वा तोरणं हर्म्यं सुपूर्णं यदि ।
अरोगता ध्रुवं ज्ञेया तदा कुर्यात् प्रतिक्रियाम् ॥ ९८ ॥

If the drop of oil inserted into the collection of urine takes the form of a swan, a duck, a pond, a lotus, an elephant, a yak, an umbrella, an arched doorway of a mansion, or if it spreads all over, then it indicates that the patient will, for certain, recover normal health, and that, therefore, the physician must commence the treatment.

99.

तैलबिन्दुर्यदा मूत्रे चालनीसदृशो भवेत् ।
कुलदोषो ध्रुवं ज्ञेयः प्रेतदोषसमुद्भवः ॥ ९९ ॥

When the drop of oil on the collection of urine takes the form of a sieve, then the

patient's ailment must be ascribed to the inauspicious residence or to the effect of the malevolent spirits.

100.

नराकारं प्रजायेत किंवा स्यान्मस्तकव्दयम् ।
भूतदोषं विजानीथाभूतविद्यां तदाऽऽचरेत् ॥ १०० ॥

When the drop of oil on the collection of urine takes the shape of a human figure, of the form of a man with two heads, then the diseases of the patient must be understood as due to disembodied spirits; and the physician must resort to the appropriate treatment.

101.

मंजिष्ठाभं धूम्रवर्णं च नीलं
स्निग्धं मूत्रं वारितुल्यं च शीतम् ।
ज्ञात्वा चित्ते बुद्धिदामानुष्याणां
कुर्यात्स्वन्तर्भेषजं रोगिणां च ॥ १०१ ॥

The clever physician must undertake the treatment only after careful deliberation, when he finds that the colour of the urine is red like madder, ashy like smoke, or dark blue, and that it is only oily, watery, and cold to touch.

102.

सर्पाकारं भवेद्वाताच्छत्राकारं तु पित्ततः ।
मुक्ताकारं बलासात् स्यादेन्मूत्रस्य लक्षणम् ॥ १०२ ॥

Owing to vāta, the drop of oil inserted into a collection of urine will assume the form of a snake; owing to pitta, it will take the form of an umbrella; and owing to kapha, it will take the form of a pearl. Thus the characteristics of urine must be known.

(b) Examination of Faeces

103.

वातात्मले तु दृढता शुष्कता चापि जायते ।
पीतता जायते पित्ताच्छुक्लता श्लेष्मतो भवेत् ।
सन्निपाते तु सर्वाणि लक्षणानि भवन्ति हि ॥ १०३ ॥

Owing to vāta, there will be hardness and dryness in the faeces; owing to pitta, there will be yellowness; owing to śleshma, there will be whiteness; and owing to the concerted action of all the three doshas, there will be all these characteristics.

104.

त्रुटितं फेनिलं रूक्षं धूमलं वातकोपतः ।
वातश्लेष्मविकारे च जायते कपिशं मलम् ॥
बद्धं सुत्रुटितं पीतश्यामं पित्तानिलाभ्रवेत् ।
पीतश्यामं श्लेष्मपित्तानीषत्सान्द्रं पिच्छिलम् ।
श्यामं त्रुटितपीताभं बद्धं श्वेतं त्रिदोषतः ॥ १०४ ॥

In conditions of the aggravation of vāta, the faeces will be broken into bits, foamy, coarse and ashy-coloured. In conditions of disturbances of vāta and śleshma it will be reddish brown. Due to the disturbances of pitta and vāta, the faeces will be bound (viz. not easily expelled.) powdery, and yellowish black in colour. In disturbances of śleshma and pitta, the faeces will acquire black colour with a mixture of yellow, and will be slightly watery and slimy. When all three doshas are disturbed, it will be black in colour, fragmented and yellowish or bound and whitish.

105.

दुर्गन्धः शीतलश्चैव शिथिलश्चैव विष्टोतसर्गो यदा भवेत् ।
तदाऽजीर्णं मलं वैद्यैर्दोषज्ञैः परिभण्यते ॥ १०५ ॥

That the food eaten has not been properly digested is suggested by the clever physicians (well acquainted with the doshas, vāta etc.) when they find the expulsion of faeces smelling and cold or fragmented.)

106.

कपिलं घृणितुक्तं च यदि वर्चोऽवलोक्यते ।
प्रक्षीणमलदोषेण दुषितः परिकथ्यते ॥ १०६ ॥

The patient, whose faecal discharge is tawny (viz. reddish) in colour and is in the form of lumps, is said to be afflicted by the disturbance of attenuated faeces.

107.

सितं महत् पुतिगन्धं मलं ज्ञेयं जलोदरे ।
श्यामं क्षये त्वामवाते पीतं सकटिवेदनम् ॥ १०७ ॥

In the disease known as jalodara, the faecal discharge will be whitish and exceedingly foul-smelling. In consumption, the faeces will be black in colour; and in āma-vāta, it will be yellowish in colour, and there will be pain around the region of the hip (and in the buttocks) while discharging the faeces.

108.

अतिकृष्णं चातिशुभ्रमतिपीतं तथारुणम् ।
मरणाय मलं किन्तु मृशोषणं मृत्यवे ध्रुवम् ॥ १०८ ॥

When the faecal discharge is exceedingly black in colour or excessively whitish or excessively yellowish or reddish, the patient's death is indicated; but when the faecal discharge is very warm, death is certain.

109-110.

वातस्य च मलं कृष्णं ततः पित्तस्य पीतविट् ।
रक्तवर्णं मलं किञ्चिन्मलं श्वेतं कफोद्भवम् ॥ १०९ ॥
आमं वा श्लेष्मजं प्राहुर्मिश्रितं वृन्दजं भवेत् ।
अपक्वं स्यादयीर्णो तु पक्वं स्वस्थमलं भवेत् ॥ ११० ॥

In conditions where vāta is aggravated, the faeces will be blackish; when pitta is aggravated it will be yellowish; and when kapha is aggravated it will be reddish, scanty or slightly whitish; and according to some authorities, the faecal discharge will contain undigested food. When the above characteristics occur in a mixed manner, they say it is due to the disturbances of two doshas. When the food eaten is not digested, the faecal matter will not ripen. The faecal matter in a healthy person will be normal viz. the essential portion of the food being digested, the waste matter (kitta alone will be involved in the 'ripe' faeces.)

111.

अत्यग्नौ पीडितं शुष्कं मन्दाग्नौ तु द्रवीकृतम् ।
दुर्गन्धं चन्द्रिकायुक्तं असाध्यमललक्षणम् ॥ १०७ ॥

When the 'digestive fire' is intense, the faecal discharge will be stringy and dry; when, however, the 'digestive fire' is sluggish, it will be watery. When the disease is incurable, the faecal matter will smell foul and its colour will be variegated like the peacock's tail.

(c) Examination of Tongue

112.

जिव्हा शीता खरस्पर्शा स्फुटिता मारुतेऽधिके ।
रक्ता श्यामा भवेत्पित्ते कफे शुभ्रातिपिच्छला ॥ ११२ ॥

When vata is aggravated, the tongue will be cold, rough to touch, and cracked; when pitta is aggravated, it will be flaming red or black; and when kapha is aggravated, it will be whitish and exceedingly slimy.

113.

मिश्रिते मिश्रिता ज्ञेया सर्वलक्षणवर्जिता ।
कृष्णा सकण्टका शुष्का सन्निपाताधिके तु सा ॥ ११३ ॥

When two doshas are aggravated, the characteristics of the tongue will be mixed. In the disturbance of all the three doshas together, however, none of these characteristics will be there: it will be black, thorny and dry.

114.

वाते च मधुरास्यत्वं पित्ते च कटुकं तथा ।
मधुराम्लं कफे चैव सर्वलिङ्गं त्रिदोषजे ।
अजीर्णे घृतपूर्णं स्यात्कषायं चाग्निमान्द्यके ॥ ११४ ॥

In the aggravation of vata, the mouth will taste sweet, but in the aggravation of pitta it will be bitter, and in the aggravation of kapha it will taste sweet and sour together. In the disturbance of all the three doshas together, the mouth will have all tastes. If the food eaten has not been digested, the mouth will

feel as if it is filled with ghee; and when the power of digestion is sluggish, the taste in the mouth will be astringent.

(d) Examination of Voice

115.

गुरुस्वरो भवेच्छ्लेष्मा स्फुटवक्ता च पित्तलः ।
उभाभ्यां रहितो वातः स्वरतश्चैव लक्षयेत् ॥ ११५ ॥

In the condition where kapha has aggravated the voice (of the patient) will be heavy; when the patient articulates clearly, it means the pitta has aggravated; and when the patient's voice is neither heavy nor his articulation clear, then it must be understood that vata has aggravated. Thus the condition (of the patient) must be ascertained by his voice

(e) Examination by Touch

116.

पित्तरोगी भवेदुष्णो वातरोगी च शीतलः ।
आर्द्रतः स भवेच्छ्लेष्मा स्पर्दतश्चैव लक्षयेत् ॥ ११६ ॥

When the patient suffers from aggravated pitta, the body will be warm; when vata is aggravated, however, the body will be cold; and if it is a case of aggravated kapha the body will be wet. Thus the condition (of the patient) must be ascertained by touch.

(f) Examination of Sight

117.

रूक्षा घृष्णा तथा रौद्रा चला चान्तर्ज्वलत्यपि ।
दृष्टिर्यदा तदा वातरोगं रोगविदो जगुः ॥ ११७ ॥

The physicians understand that the patient is suffering from aggravated vata when his sight is coarse, dry, ash-coloured, fierce, fickle, and accompanied by burning sensation within. The eyes, when pitta is aggravated, cannot endure bright light; they burn and they are yellowish colour. When kapha is aggravated, they are filled with water, devoid of lustre and unctuous.

118.

द्वन्द्वदोषे भवेन्मिश्रं तूर्णं विलोचनम् ।
श्यामवर्णं च निर्भृशं तन्नामोहसमन्वितम् ।
रौद्रं च रक्तवर्णं च भवेच्चक्षुस्त्रिदोषतः ॥ ११८ ॥

When two doshas have together been disturbed, then there is a combination of these (above mentioned) symptoms in the eyes, characteristic of the doshas that are disturbed; and the eyes are marked by rapid and changing glances. When all three doshas are disturbed simultaneously, then the eyes are dark in hue, they lose their normal shape, and become heavy and sleepy; they may also be fierce and reddish.

119.

एकं चक्षुर्यदा भीमं व्दीतीयं मीलितं भवेत् ।
त्रिभिर्दिनैस्तदा रोगी स याति यममन्दिरम् ॥ ११९ ॥

When one of the eyes become fierce and the other eye closes, then it indicates that the patient will die in three days.

120.

ज्योतिर्विहीनं सहसा रोगिणो यस्य लोचनम् ।
ईषत्कृष्णं स नियतं प्रयाति यमशासनम् ॥ १२० ॥

When the eyes suddenly lose their lustre and become slightly black in colour, then the patient will not survive.

121.

सरक्तं कृष्णवर्णं च रौद्रं च प्रेक्ष्यते यदा ।
इति लिङ्गैर्विजानीयान्मृत्युवेव न संशयः ॥ १२१ ॥

It must be understood that the patient will undoubtedly die when his eyes become bloodstained and black in colour, and appear fierce.

122.

एकदृष्टिरचैतन्यो भ्रमस्फुरिततारकः ।
एकत्रेण नियतं परलोकपथं व्रजेत् ॥ १२२ ॥

The patient will surely die, within one night, when his eyes get fixed (viz. are glaring and staring), pupils of the eyes are exceedingly unsteady owing to delusions and hallucinations.

(g) Examination of the Appearance**123.**

विभुत्वादाशुकारित्वाव्दलित्वादन्यकोपनात् ।
स्वातंत्र्याव्दहुरोगत्वाद्दोषाणां प्रबलोऽनिलः ॥ १२३ ॥

The vāta is the most powerful among the three doshas, because it is all-pervasive, quickest in action, and most potent, and because it excites the other (two) doshas, and is independent (of the influence of the other two doshas), and also because it produces more diseases than the other (two) doshas do.

124.

प्रायोऽत एव पवनाध्युषिता मनुष्या
दोषात्मकाः स्फुटितधूसरकेशाग्रात्राः ।
शीतव्दिषशचलधृतिस्मृतिबुद्धिचेष्टा-
सौहार्ददृष्टिगतयोऽतिबहुप्रलापाः ॥ १२४ ॥

It is therefore that the people whose constitution is overridden by vāta are erroneous by nature, they have cracked bodies and hair, which are also ashy in colour; they dislike cold (viz. cold things and cold weather); their fortitude is rapidly altering, and so are their memory, intelligence, effort, eyesight and gait; and they also talk excessively and talk nonsense.

125.

पित्तं बद्धिर्विहिजं वा यदस्मा-
त्पित्तोद्विक्तस्तीव्रतृष्णाबुभुक्षः ।
गौरौष्णाङ्गस्ताग्रहस्तांघ्रि वक्त्रः
शूरो मानी पिण्केशोऽल्परोमा ॥ १२५ ॥

As pitta is in its nature fire, and is born out of fire, the person whose constitution is overridden by pitta will be intensely hungry and

thirsty; his body will be yellowish in hue, and warm coloured: he will be brave and arrogant; his hair will be tawny coloured, and his body-hair slight.

126.

श्लेष्मा सोमः श्लेष्मस्तेन सोम्यो

गूढस्निग्धशिलघ्नसन्ध्यस्थिमांसः ।

क्षुत्तृच्छोकक्लेदधर्मैरतप्तो

बुध्दया युक्तः सात्विकः सत्यसन्धः ॥ १२६ ॥

Sleshma is in its nature moon-like, the person whose constitution is dominated by sleshma will be quiet and placid; his joints will be well concealed, his bones will be unctuous, and his muscle will be well-knit; he will be able to endure hunger, thirst, sorrow and inclemencies of weather; he is endowed with intelligence, & good by temperament, and honest (truthful).

127-128.

अधृतिरदृढसौहृदः कृतघ्नः

कृशपरुषो धमनीततः प्रलापी ।

द्रुतगतिरटनोऽनवस्थितात्मा

वियति च गच्छति संभ्रमेण सुप्तः ॥ १२७ ॥

अव्यवस्थितमतिश्चलदृष्टि-

र्मन्दरत्नघनसञ्चयमित्रः ।

किञ्चिदेव विलपत्यनिबद्धं

मारुतप्रकृतिरेष मनुष्यः ॥ १२८ ॥

The person is to be understood as having a constitution dominated by vata when he lack fortitude, when his affections are unsteady, when he is ungrateful, when he is thin, coarse (viz. strong) and sinewy, when he talks much and uselessly, when he is fast in walking and talking, when he is exceedingly unsteady in his posture, when he dreams (in his sleep) of walking excitedly in the sky, when he is unsettled in his mind, when his looks are fleeting, when his wealth and friends are slight and few, and when he talks incoherently and incompletely.

129-130.

मेधावि निपुणमतिर्विगल्भवक्ता

तेजस्वी समितिषु दुर्निवारवीर्यः ।

सुप्तः सन् कनकपलाशकर्णिकारान्

संपश्येदपि च हुताशविद्युदुल्काः ॥ १२९ ॥

न भयात्पणमदैतन्तेष्टमृदुः

प्रणतेष्वपि सान्त्वनदानपरः ।

भवतीह सदा व्यथितास्यगतिः

स भवेदिह पित्तमयप्रकृतिः ॥ १३० ॥

The person is to be understood as having a constitution dominated by pitta, when he is bright in mind, clever, and brilliant in conversation; when he is full of lustre and invincible in arguments; when he dreams (in sleep) of gold, palasa-tree, fire, lightning and flaming torch; when he does not submit to anyone out of fear; when he is harsh with those who will not submit to him; who is bent on comforting even the enemies who have sought refuge in him, and on being generous towards them. Such a one will be uninterrupted in his conduct (viz. will be not troubled in his life-course)

131-132.

शुक्लाक्षः स्थिरकुटिलालिनीलकेशो

लक्ष्मीवान् जलदमृदङ्गसिंहघोषः ।

सुप्तः सन् सकमलहंसचक्रवाकान्

संपश्येदपि च जलाशयान्मनोज्ञान् ॥ १३१ ॥

रक्तान्तनेत्रः सुविभक्तगात्रः

स्निग्धच्छविः सत्वगुणोपपन्नः ।

क्लेशक्षमो मानयिता गुरुणाम्

ज्ञेयो बलासप्रकृतिर्मनुष्यः ॥ १३२ ॥

The person is to be understood as having a constitution dominated by kapha (balasa), when his eyes are whitish; when his hair is firm, wavy and black; when he is lustrous; when his voice resembles the rumbling of the cloud or the roar of the lion; when he dreams (in sleep) of lovely ponds filled with lotus flowers, swans and cnakravaka birds; when the corners of his eyes are reddish; when his

limbs are well-formed and distinct; when his body shines; being unctuous; when he is equipped with good qualities; when he is able to endure suffering; and when he is deferential towards elders.

133.

द्वयोर्वा तिसृणां वापि प्रकृतीनां तु लक्षणैः
ज्ञात्वा संसर्गजा वैद्यः प्रकृतीरभिनिर्दिशेत् ॥ १३३ ॥

The physician must determine the mixed constitutions after ascertaining the combination of qualities characteristic of two, or of three constitutions.

134.

विषजातो यथा कीटो न विषेण विपद्यते ।
तद्वत् प्रकृतयो मर्त्यं शक्नुवन्ति न बाधितुम् ॥ १३२ ॥

Even as the worm born in poison will not be harmed by poison, the defects characteristic of a constitution will not adversely affect the person having that constitution.

(h) Examination of Life-Span

135.

भिषगादौ परीक्षेत रुग्णस्यायुः प्रयत्नतः ।
सत्यायुषि तु विस्तीर्णे चिकित्सा सफला भवेत् ॥ १३५ ॥

The physician must first of all ascertain by examination the life-span of the patient, for surely the treatment would be effective only if the patient has sufficient longevity.

136.

सौम्या दृष्टिर्भवेद्यस्य श्रोत्रं वक्तं तथैव च ।
स्वादुगन्धं विजानाति स साध्यो नात्र संशयः ॥ १३६ ॥

There can be no doubt that the patient whose eyes are calm, whose ears are alert and whose face is tranquil, and who will apprehend aright both taste and odour, will benefit by the treatment (viz. his disease is curable.)

137.

पाणी पादौ च यस्योष्णौ दाहः स्वल्पतरो भवेत् ।
जिह्वा सुकोमला यस्य स रोगी न विनश्यति ॥ १३७ ॥

The patient whose hands and feet are warm, whose body-burning is slight, and whose tongue is soft, will surely not die.

138.

स्वेदहीनो ज्वरो यस्य श्वासो नासिकया चरेत् ।
कण्ठश्च कफहीनः स्यात् स रोगी जीवति ध्रुवम् ॥ १३८ ॥

The patient who sleeps well, whose body is capable of effort, and whose sensory functions are normal, will, of course, not die (of the disease he is suffering from.)

139.

सौम्या दृष्टिर्वदति विमलं हस्तपादौ सदोष्णौ
स्वल्पो दाहः सुरसवदनः कोमला यस्य जिह्वा ।
नासा श्वासो वहति सरलः स्वेदहीनो ज्वरोऽसौ
साध्यो रोगी भवति नियतं वैद्यभैषज्ययोग्यः ॥ १३९ ॥

The patient will surely respond favourably to the treatment when his eye-sight is calm, when he talks distinctly, when his hands and feet are warm, when his body-burning is slight, when his mouth can apprehend tastes, when his tongue is soft, when he breathes through his nostrils straight, and whose fever is free from sweating.

140-141.

मङ्गलाचारसम्पन्नः परिवारस्तथातुरः ।
श्रद्धधानोऽनुकूलश्च प्रभूतद्रव्यसङ्ग्रहः ॥ १४० ॥
सत्त्वलक्षणसंयुक्तो भक्तिवैद्यविजितिषु ।
चिकित्सायामनिर्वेदस्तदारोग्यस्य लक्षणम् ॥ १४१ ॥

Cure of the ailment is indicated when the patient is surrounded by people whose conduct is auspicious, when he (viz. the patient) has faith in the physician and cooperates with him, when he is wealthy, when he is brave and equipped with meritorious qualities, when he is deferential towards physicians and holy persons, and when he has not given up hope in the treatment.