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FOR CONSULTATION ONLY
AN ENGLISH TRANSLATION

OF

THE SUSHRUTA SAMHITA

WITH

A FULL AND COMPREHENSIVE INTRODUCTION, ADDITIONAL TEXTS,
DIFFERENT READINGS, NOTES, COMPARATIVE VIEWS,
INDEX, GLOSSARY AND PLATES

IN THREE VOLUMES

EDITED BY

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Vol. II.

NIDĀNA-STHĀNA, S'ĀRIRA-STHĀNA, CHIKITSITA-
STHĀNA AND KALĀPA-STHĀNA.

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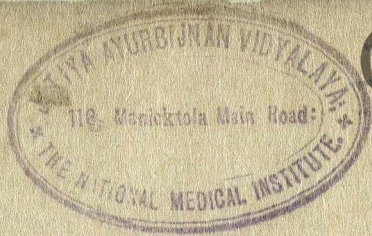
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PREFACE.

It is with mingled feelings of pain and pleasure that we now place before the public the Second Volume of our English Translation of the Susruta Samhita. The arduous task of compiling a connected and succinct history of any part whatever, of the ancient Hindu System of Medicine—requires greater leisure and more extensive reading than we can lay any pretension to. Years of patient study and constant discourse with our sainted preceptor the late lamented Mahamahopadhyaya Kaviraj Dwaraka Nath Sen, Kaviratna, that refulgent link of the golden chain of the Dhanvantaric succession, have enabled us, however, to grasp the leading facts, and during the last few years we have worked continuously, in moments snatched from the practice of an anxious profession that knows no respite, to arrange these facts in their present form. It breaks our heart to record the sad departure of our venerable Acharyya from this sublunary sphere to a land “from whose bourne no traveller e’er returns.”

It is hardly necessary for us to reply to those critics who, through their ignorance of the original



Sanskrit works, persist in describing Ayurveda as an empirical system destitute of Anatomy, Physiology or Pathology in any scientific sense.

It behoves us, however, in this preface to meet some of the charges which have been brought against us.

Exception has been taken to our not including in the opening stanza the usual invocation to the Supreme Self (for a successful completion of the work) although it has found its way into almost all the printed editions of the work extant.

Now the stanza referred to finds no place in the various manuscript copies of the original work which are in our possession, or on which we have been able to lay our hands. The work was first put into print by the late Dr. Madhusudan Gupta and we believe that it was only in this printed edition that the benedictory address in question appeared for the first time, and that it has since crept, by the process of circulation, into subsequent printed editions.

In this opinion we are supported by the fact, that in none of the various commentaries and annotations on the Susruta Samhita is any mention made of the line in question, whereas, had it been the opening stanza of the original work, it would certainly have received at least a passing notice at the hands of the commentators, however easy or simple it might have been. Further, were it composed by Susruta himself, it would not have

been in the form in which we find it in the printed editions. The ancient sages used invariably the auspicious expression “अथातः” or “अथम्” and the like, when commencing a work and never invoked any particular deity for a happy termination of their undertaking.* These are the reasons which have led us to omit the passage in our present translation.

Another objection raised by a certain section of the community is that we should not have at all undertaken to translate the work into the English language. Their contention is that the Ayurveda, being an integral portion of the Eternal Vedas, should, on no account, be rendered into a *Mlechchha Bhāshā* and thus made accessible to the public at large, irrespective of caste or creed.

Such an objection, at this time of the day, is, to say the least, most puerile! Truth is truth, and latitudes and longitudes are not its boundary lines. The Vedas themselves have been translated into many European languages. To keep the truths promulgated by our ancient sages confined within the *coterie* of the privileged classes and thus to deprive the educated public of the

* Thus :—

- (a) “अथातो दीर्घञ्जीवितीयमध्यायं व्याख्यास्यामः”—Charaka Samhitā.
- (b) “अथातो घञ्मं व्याख्यास्यामः”—Kanāda Vaiseshika Sutra
- (c) “अथातो ब्रह्मजिज्ञासा”—Vedānta Sutra.



benefit of such truths would certainly be a sacrilege. In giving preference to English as the medium of translation we have been actuated by more reasons than one.

It cannot be gainsaid that English has now become almost the *lingua franca* of the world, and to disseminate the ancient wisdom of India throughout the world, we could not have selected a medium better than the English language.

Besides this, we have been actuated by the hope of drawing the direct attention of our benign Government to the scientific value of our system of Medicine by the adoption of such a procedure.

Here we must not stop without expressing our sincere and hearty thanks to our learned and valued friends Kaviraj Jogindranath Sen, M.A., Vidyabhusana, Kaviraj Jnanendranath Sen, B.A., Kaviratna and Professor Satyendranath Sen, M.A., Vidyāvágisa, who have rendered us material help in the publication of this volume. We must freely admit that but for the active and continued co-operation of the above-named gentlemen we could not have brought out this volume so promptly and successfully. Our thanks are also due to Dr. S. Sanyal, B.Sc., L.M.S. for his kind help, to Dr. S. N. Goswami, B.A., L.M.S. for his kindly supplying us with materials for writing the Introduction, and to our readers for their kind encouragement.



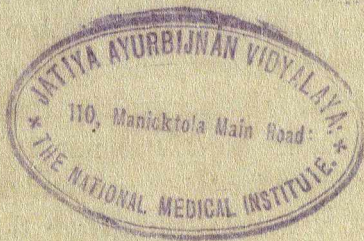
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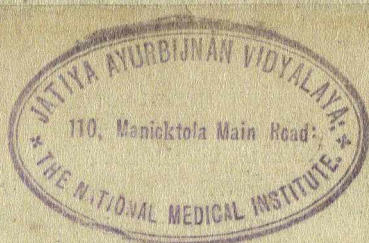
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In conclusion, we implore our readers to excuse the errors of omission and commission which are inevitable in the execution of such a huge work, more especially when the author is encumbered with the responsible duties of his profession involving, as they do, the life and death of persons entrusted to his care.

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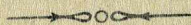
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INTRODUCTION.



In the introduction of the first volume of our translation of the Susruta-Samhitá we have attempted to place before the public a correct interpretation of Váyu, Pitta and Kapha, the falsely so-called humours of the body* and it is a great pleasure to us, that our pronouncement has been very kindly accepted. In the introduction of the present volume we would draw the attention of the readers to the fact that Ayurveda is not at all an encyclopædic work,—an Encyclopædia of the Indian

* Berdoe says :—“What is known as the Humoral Pathology formed the most essential part of the system of the Dogmatics. Humoral Pathology explains all diseases as caused by the mixture of the four cardinal humours, *viz.*, the blood, bile, mucus or phlegm and water. Hippocrates first leaned towards it, but it was Plato who developed it. The stomach is the common source of all these humours. When diseases develop, they attract humours. The source of the bile is the liver, of the mucus the head, of the water the spleen. Bile causes catarrhs and rheumatism, dropsy depends on the spleen.”

Be it observed that among the humours of Hippocrates there is no place for Váta although in point of fact both his Physiology and Pathology are to be traced to the “Tri-dhātu” of Ayurveda. The secret of this anomaly is that the theory of Váta was found to be a complicated one and Hippocrates, not being able to comprehend its original import, left it out and cautiously introduced, in its stead, his own theory of “water”. Sowe find “Humoral Pathology is not of Indian origin ; neither it is the same which the Indian Rishis of Rigveda developed under the name of Tri-dhātu.” It is simply an imitation of Susruta who introduced blood (शोणितचतुर्थैः) as the fourth factor in the genesis of diseases. But the borrower, in his interpretation of Susruta, had made a mess of it. He retained blood, but substituted “water” in place of Váta, the most important of the three, for reasons best known to him.



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system of Medicine in all its departments, but it is the Science of Life entire.

Though it is customary and convenient to group apart such phenomena as are termed mental and such of them as are exhibited by men in society, under the heads of Psychology and Sociology, yet it must be allowed that there are no absolute demarcations in Nature, corresponding to them, and so in the entire Science of Life, psychology and sociology are inseparably linked with Anatomy and Physiology, nay, more, with Pathology and Hygiene and above all with Treatment. In short the Biological Sciences must deal with whatever phenomena are manifested by living matter in whatever condition it is placed. Life in health (सुखायुः) as well as Life in disease (दुःखायुः), therefore, fall within the scope of Biology—even life exhibited by man in Society (हिताहितं) is not exempted from it.

हिताहितं सुखं दुःखमायुस्तस्य हिताहितम् ।

मानञ्च तच्च यत्कीर्त्तमायुर्वेदः स उच्यते ॥ चरक, श्लोकस्थान, १२ अध्याय ।

In calling Ayurveda, therefore, the entire Science of Life,

Ayurveda,—the entire Science of Life.

We are not guided by any prejudice of our own, but we rely solely on facts and figures, and these, when

closely studied, will lead any one to arrive at the same conclusion, not unlike our own and to interpret Ayurveda as a collection of Biological Sciences in all departments. In the first place, for the guidance of our readers, we will mention that the name Ayurveda itself is a strong evidence

Negative Evidence thereof:—

I. The Name itself.

in favour of its being called the **Science of Life**. Secondly, we will refer to

the arrangement of the subject-matter in the Sārira-sthāna which is popularly belived to be the anatomical portion of the book, as tending to the same conclusion. In

II. The arrangement of the subject-matters.

this section, chapters on Midwifery and Management of Infants follow

close to the heels of those on Anatomy and Physiology, and



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these latter again are immediately preceded by chapters on Psychology. This intermixture is certainly an anomaly and can in no wise be satisfactorily explained unless we have to look upon these as general truths of Biology, elucidated by the Introduction of special truths exclusively collected from the science of medicine—*मित्रगादिषु संसाध्य सन्दर्शितानि* । To call it Descriptive Anatomy or Physiology, in the modern sense of the term is simply ridiculous. The

Want of Descriptive Anatomy and Physiology in the sections of *Sarira-sthana* itself:—

absence of any reference to brain and spinal cord, to pancreas and heart, in a book of Anatomy and Physiology is unpardonable and in the *Sarira-sthana* we feel this absence almost to despondency. Moreover, in western medical science, Grey's Anatomy and Kirke's Physiology, for instance, in their bulk, exceeds, each, more than a thousand of pages and to present to the public, under the same name less than half a dozen of pages, as the result of Indian wisdom, is certainly a very miserable contrast—a contrast that is calculated to inspire no admiration, but, on the contrary, to generate in scientific minds an universal apathy, at least an apathy towards all that is connected with the system of Indian Medicine. In order to save our venerable Rishis from this disastrous plight, we announce here foremost of all, that our beloved Science of Ayurveda is by no means an Encyclopædic work, but

Positive Evidences.

I The definition of Ayus.

Same as Life as defined by Mr. Herbert Spencer.

distinctly possesses every characteristic that marks the Science of Biology.

The very name *Ayurvada* indicates that it is actually a science of *Ayus* and the word *Ayus* is used here in the same sense as Mr. Herbert Spencer

understands by his remarkable definition of Life.

In his masterly classification Mr. Herbert Spencer has, in his Biology, given, indeed, the first place to Anatomy and Physiology, but still it is divested of any elaborate chapters dealing with the subjects.



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In the science of Life a short reference to the structures of the body or its functions is quite sufficient to illustrate its principles, and if we fail to find therein any discourse on the descriptive Anatomy and Physiology, we still consider that there is nothing amiss.

But unfortunately the fate of Ayurveda is otherwise. Though the very name indicates that it is Biology pure and simple, still it is denounced for its deficiencies in Anatomy and Physiology, and doomed for ever.

Sanskrit words are notorious for their confusion of meanings, but, as regards Ayurveda there exists no difference of opinion, at least, so far as the first word is concerned. *Ayus* is *Ayus* everywhere in Ayurveda and it is the only fault our venerable Rishis may be reasonably charged with, that they did not put themselves into any great trouble to explain *Ayus*, but, on the contrary, unlike scientific men, misspent their energy to ascertain the significance of the insignificant portion of Ayurveda, that is the meanings of the root "*Vida*" in the light of Grammar.

The scientific ear, ever unsatisfied with these grammatical eruditions, has ultimately thrust an Encyclopædic value upon what is properly speaking, a book of Biology. Of course, there is a marked difference between the two. An ordinary treatise on Biology deals with the general truths of life, and does not represent, by way of illustrations, all its special truths, nor their practical sides, but so far as Ayurveda is concerned, the general truths of Biology are thrown into the background and the special truths, gleaned exclusively from the science of medicine, are given great prominence (भिषगादिषु संसार्थे सन्दर्शितानि), so much so, that it is now regarded as a system of Medicine and Surgery which has neither Biology, nor Anatomy, nor Physiology, nor Pathology—but is a systematised Empiricism or Quackery. This is certainly a great misfortune. Apart from the name, the arrangement of the subject, to which we have just referred, at least, in the section of *Sārira-sthāna* (the falsely so-called Anatomy of



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the Hindus),—is a direct contradiction to its being considered as an Encyclopædic work. The existence of the chapters on midwifery and management of infants in the same, following immediately the chapters on Anatomy, serves as a strong additional evidence thereof. It is an anomaly no doubt, that Midwifery has been offered a place in the section of

Reasons for incorporating Midwifery into this Anatomical section.

Anatomy, but the confusion does not get at all confounded, if we are led to believe that the science of generation of a superior race (if we are at all permitted to use the term) forms, indeed, an important department of Practical Biology.

From whatever standpoint we look to the question, we find there are grounds to lead any one to pronounce in our favour and to come to the conclusion at which we now venture to arrive. Besides these two important facts,

Internal evidence.

we now cite the following passage as a strong internal evidence in favour of our view. Maharshi Punarvasu, after giving us a short table of the principal structures of the human body, remarks that even this reference is considered by many as superfluous,

Reasons for omitting Descriptive Anatomy.

on the ground, that an acquaintance with the molecular construction of an organism is quite sufficient to help us as a reliable guide to treatment.

The passage referred to is quoted below :—

“एके तदुभयस्य न विकल्पयन्ते प्रकृतिमावाच्छरीरस्य ।”

Now we ask the reader if this is not a sufficient evidence, proving to the hilt, that Ayurveda is nothing but Biology and that we run no risk of committing a grave omission if the chapter on Anatomy is wholesale dispensed with from Ayurveda. For the improvement of this awkward position—that in the section of Anatomy there should be no Anatomy—the entire credit is due to Susruta, as he has very wisely made the suggestion, that a knowledge of the anatomical structures of the body is of great value, at least so far as it

helps the Surgeons and the Surgeons only in their operations.*

But so far as Biology is concerned with medicine, Susruta does not forget to lay particular stress on the knowledge of the molecular construction of the body. The following memorable passages actually preached by this renowned Surgeon, some three hundred centuries ago, still stands as a model from which modern Science, even in its present advancement, can draw inspirations.

He says :—

1. न शक्यश्चक्षुषा द्रष्टुं देहे सूक्ष्मतमो विभुः ।
दृश्यते ज्ञानचक्षुर्भिस्तपश्चक्षुर्भिरेव च ॥
शरीरे चैव शास्त्रे च दृष्टार्थः स्याद्विशारदः ।
दृष्ट्युताभ्यां सन्देहमवापोह्याचरेत् क्रियाः ॥
2. तस्मान्निःसंशयं ज्ञानं हृत्वा शल्यस्य वाङ्मता ।
शोधयित्वा मृतं सम्यग् द्रष्टव्योऽङ्गविनिश्चयः ॥
प्रत्यक्षतो हि यद् दृष्टं शास्त्रदृष्टञ्च यद्ववेत् ।
समासतस्तदुभयं भूयो ज्ञानविवर्द्धनम् ॥

That is, the protean work of the protoplasm in which the great Self resides cannot be detected by the body's eye ; to know its work, mind's eye is necessary, along with the body's eye. For acquiring efficiency in Surgery alone, the dissection

* Susruta recommends dissection on dead human bodies and suggests that it is only required of those who will practise surgery and that students of medicine can do without it. Herophilus practised dissection on living bodies and with the object of practising medicine successfully, but it soon fell into disrepute and did not at all influence the art of Medicine. He was condemned even by his own pupil Philinus of cos who declared that all the Anatomy his vivisectioning master had taught him had not helped him in the least in the cure of his patients. Such indeed was the fate of vivisection for which Europe now takes pride.

But Susruta's, *Avagharshana* is now considered by many as the only perfect mode of dissection ever known. It is with the help of this method of dissection that the layers of epidermis and dermis could be discovered and blood-vessels with their minute branches could be counted to be as many as thirty millions. Not only this, but also in the opinion of several European savants, Susruta still stands as a model of surgery and European surgery has borrowed many things from Susruta and has yet many things to learn.

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of dead body (not of living body as proclaimed by Herophilus), nay, the *Avagharshana* which brings into view

The knowledge of the Molecular Construction of the body is all that is wanted.

the layers of the epidermis and the dermis, the number and branches of blood-vessels and nerves that lie embedded in muscles, etc., is only necessary.

Professor Michael Foster's remarks in his article on Physiology in the *Encyclopædia Britannica*, to all appearances, are just in the same line, if not identical with our extract, when he says "that the problem of Physiology, in the future, is largely concerned in arriving by experiment and inference, by the *mind's eye*, and not by the body's eye alone, assisted, as that may be, by lenses yet to be introduced at a knowledge of the molecular construction of the protean protoplasm; of the laws according to which it is built up and the laws according to which it breaks down; for these laws when ascertained will clear up the mysteries of the protean work which the protoplasm does."

In short the knowledge of the molecular construction of the body is just the thing with which Biology is concerned, and such is the unanimous verdict both in the East as well as in the West, in the most ancient and in the most modern Sciences of the world. Now, if the 'knowledge of the molecular construction of the protoplasm, of the laws according to which it is built up, and the laws according to which it breaks down,' is all that is necessary for an accurate knowledge of Anatomy and Physiology, our Ayurveda is pre-eminently the Science we want.

The following extracts, from Charaka Samhitá, are cited here to prove that we are quite justified in our contention.

1. शरीरावयवास्तु परमाणुभेदेनाप्रसंख्येया भवन्ति—तेषां संयोगविभागे वायुः कारणम् । कर्म्म स्वभावश्चेति ।

2. शरीरसंख्यां यो वेद सर्वावयवशो भिषक् ।

तदज्ञाननिमित्तेन स मोहेन न युज्यते ॥

That is, the body is composed of molecules and these are said to be numberless, because no body can count them up.



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By their union, they build up the body, and this union is governed by three Laws, viz., the Laws of Váyu, Karma and Swabháva (which are almost equivalent to the three Biological Laws, *i.e.*, the law of heredity, the law of external relations and the law of molecular motion caused by Ethereal vibrations compared with which nerve-impulses—akin to electric force,—are grosser and coarser shocks). So far we think we have proved that Ayurveda, as a Biology is not defective, if it contains no descriptive Anatomy and Physiology—descriptive in the same sense as Grey's Anatomy or Kirke's Physiology is. Its Histiology is molecular; its Pathology is molecular; its Physiology is molecular. **Molecular in every sense is the Biology of the Hindus.** Virtually speaking, Ayurveda is our Science of Life, and we will presently shew that *Life* and *Ayus* are identical.

The continuous adjustment of molecules, their successive breaking down and building up within an organised living body, without destroying its identity, is the definition of *Ayus* as suggested by Maharshi Punarvasu.

He says :—

शरीरेन्द्रियसत्वात्मसंयोगो धारि जीवितम् ।

नित्यगत्यानुवन्धश्च पर्यायैरायुरुच्यते ॥

In another place the same definition is repeated with a slight modification and in this he enumerates चेतनानुवृत्तिः, (consciousness) as the most distinctive

The Definition of Ayu. characteristic of *Ayus*. According to this

definition, शरीरेन्द्रियसत्वात्मसंयोगः and चेतनानुवृत्तिः refer to an organised living body ; नित्यगः and अनुवन्धः are identical with processes of breaking down and building up of the organism without destroying its identity. The idea of continuous adjustment is included also in these two words.

So we find, the definition of *Ayus*, as suggested by Punarvasu,

includes more than what is proposed in **The same as Life.** Mr. Herbert Spencer's definition of *Life*.

The words धारि and जीवितम्, as explained by the great annotator Chakrapáni, represent two more distinct phases of Life, the

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first bearing upon the existence in the system of a preventive factor of putrefaction, the second pointing to the agent or agents that adjust the internal relations by delicate touches, which professor Michael

More comprehensive than Life as defined by Mr. Herbert Spencer.

Foster speaks of as "continuously passing from protoplasm to protoplasm and compared with which the nervous impulses (which are perhaps electrical in nature)

Prof. Michael Foster on the Theory of Sensation.

are grosser and coarser shocks." Now this last epithet, *viz.*, "जीवितं," as explained by Chakrapāni—"जीवयति प्राणान् धारयति"—furnishes us with a clue to determine what *Ayus* (आयुः) actually means.

The Findings of the Upanishads.

Our Sacred Upanishads now come forward to our relief and tell us, in the first place, "आयुः प्राणः," *i.e.*, Ayu and Prāna are one and the same principle. In the second place, "यः प्राणः स वायुः," *i.e.*, Prāna and Vāyu are identical. In the third place, "स एष एवायं वायुराकाशिनानन्तः," *i.e.*, Vāyu is not unlike Ether. In the fourth place, "खं पुराणं वायुरं खं," *i.e.*, the primitive fluid (according to Lord Kelvin) is divided into two parts, *viz.*, one without motion, another endowed with motion. In the fifth place, "सर्वमिदं वायुः," *i.e.*, everything in this world are waves of this Ether endowed with motion. In the sixth place, "वायुर्वायं सर्वगतः," "वायुरेव देवेषु, प्राणः प्राणेषु," *i.e.*, Vāyu is the universal store of energy; in the Physical world it is known by the name of Vāyu; in the Living world it is called under a different name and that name is Prāna (प्राणः).

From the above short table we come to know that the agent that adjusts the internal relations to external relations, is *Ayus* and that *Ayus* is Life, and that Life is a motion of the great ethereal fluid which is known in Sanskrit as "खं" and that

The same as primitive fluid as defined by Lord Kelvin.

"वायुरं खं" is the sum of all the various energies—biological and abiological—which under the name of heat, light, electricity or consciousness, etc., manifest themselves both in the Physical as well as in the Metaphysical



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world, and that Prāna (प्राणः) is another name of the same force that, in acting on an aggregated living body, divides itself into five distinct forces, viz., *Prāna*, *Apāna*, *Samāna*, *Udāna*, and *Vyāna*, and subserves the functions of correlation (वायुः) and sustentation (पित्तं) and controls oxidation (श्लेष्मा). So Prāna continuously helps to adjust, like the main-spring of a watch, the internal relations to the external relations. We are indebted to the master mind of Sankara for his able exposition

The Identity of Vāyu and Ether.

tion of the functions of this main-spring, that is, of the etherial vibrations (वायुप्राणः) as transformed into the vital force in an organised body. We quote below what he says about it in his celebrated commentary on the Vedānta Darsana.

The five divisions of Vāyu in its action on a living aggregate.

वायुरेवायमध्यात्मभाषणः पञ्चव्यूहो विशेषात्मनाऽवतिष्ठ-
मानः प्राणो नाम सण्यते न तत्त्वान्तरं नाऽपि वायु-
मात्रम् । अतश्चोभे अपि भेदाभेदव्युत्पत्तिरिति न विरुध्येते ।
२।४।६ ।

That is, the primitive fluid that is endued with motion in its evolution of Life gets knotted into five divisions, viz., *Prāna*, *Apāna*, *Samāna*, *Udāna* and *Vyāna*, and this acting on any aggregated living matter is called **Prana**. So what we call Prāna is not the Vāyu itself, but a particular mode of its motion. Hence the question of identity and non-identity is a matter of choice. Shortly speaking, this is the Biology of the Hindus. This too is the sum and substance into which (as a department of Biology), Physiology unfolds itself.

Biology forms the basis — Medical Science developed as so much collateral branches.

This too evidently serves as the line of demarcation between सुखायुः and दुःखायुः, हितायुः and अहितायुः. From this too Health and Disease, Hygiene and Treatment, Psychology and Sociology have all their origin and start. In fact, Biology forms the basis upon which the great edifice of the Indian Medical Science, as a collateral branch, has been developed.

Conclusion.

The general truths of Biology are all there in the Ayurveda; but the special truths from medicine



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have been given so great a prominence that the real character of the book has been over-shadowed and it has been transformed into a Science of Medicine.

* * * * *

With a view to convey to the minds of our readers an idea of the different branches of the Medical Science which developed as a collateral branch of this great Science of Life, we would here touch upon a few of them in passing.

Magnetism. Magnetism had formed its way into the therapeutics of the ancient Hindus and animal magnetism was very extensively practised in India long before they were recognised by Mesmer in Germany and subsequently by John Elliotson in England.

Hydropathy. The Indian writers on Medical Science of the good old days have described in length the medicinal properties of the waters of the principal rivers, lakes, water-falls and mineral springs of the country that were known at the time and their respective curative powers as applied to various ailments that human flesh is heir to. This goes a long way to establish the fact that Hydropathy was known in India long before it was even dreamt of in the Western world.

Massage. The ancient Hindu sages from time immemorial had been cognizant of the benefits of massage and shampooing and taken to practising them. Whereas, it is but of late that the advantages of these methods have begun to be appreciated by the Western Medical School and it no longer hesitates to acknowledge them as efficacious therapeutic agents.

Genesiology. The Science of begetting healthy and beautiful children, which is just beginning to receive attention in other countries was not unknown to the ancient Hindus, and Manu in his *Mánava-dharma-Sástra* has laid down special injunctions which still form an integral part of the domestic life of the orthodox section of the community. As a matter of fact, they knew



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that mental impressions of the parents at the time of conception exercise a great influence over the future destiny of the child in embryo.

Thus we read in the *Sāstras* :—"A woman, though at a distance, conceives a child of the shape of the person she loves ardently and thinks of at the time. Just as a tree that grows is not different from the parent tree whether we plant a branch or sow a seed, so the main features of the child partake of the features of its father, though there might be slight changes due to the soil."

The subtle soul co-operates with the *Manas* (the mind) ; the mind co-operates with the senses ; the senses perceive objects ; all this takes place in little or no time. The above is the connection between the soul and objects around us. What is there which the mind cannot comprehend ? Therefore, wherever the mind enters, the soul follows it.

"The soul being subtle, whenever it enters another soul, requires some time and an effort of the mind to know the latter. The soul, which intensely meditates on an object, assumes the shape of that object." etc, etc.

In a book entitled *Bhoja-Prabandha* being a collection of the anecdotes relating to the reign of *Bhoja Rāja*, by *Pandita Ballala* there is narrated the detail of an interesting surgical operation which had been performed on the *Rāja*, who was suffering from an excruciating pain in the head. All the medical aid obtaining at the same time was availed of, but in vain and his condition became quite critical when two brother physicians accidentally arrived in *Dhar*, who were duly called in. These physicians, after carefully examining the patient, held that unless surgically treated no relief could possibly be afforded to the Royal patient. Accordingly they administered an anæsthetic called **Sammohini** with

* *Vide*—*Barāha Mihir's Brihat Samhitā Book, II. Chapter lxxv. Verses 1-3.*



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a view to render him insensible and, when completely under the influence of the drug, they trephined his skull, removed the malignant portion of the brain, the actual seat of the complaint, closed and stitched up the opening and applied a healing balm to the wound. Then they administered a restoration known as **Sanjivani** to the patient, who, thereupon, regained consciousness and felt quite at ease. This incident (as narrated by Thakur Saheb of Gondal in his Short History of Aryan Medical Science) goes to prove that the attendant physician of Buddha, is likewise recorded to have practised cranial surgery with the greatest success. Instances of successful cases of abdominal section are also not rare. Thus it will appear that the ancient Indians knew and successfully practised surgical operations which are regarded now-a-days as the greatest triumphs of modern surgery. The purpose of chloroform in the palmy days of yore was used to be served by **Sammohini**, but there is hardly a drug known to modern Pharmacopæias, corresponding with **Sanjivani** which certainly lessens the chances of deaths that at present sometimes occur under anæsthetics.

Let them, who allege that the Hindu system of the healing Art is unscientific, now pause and reflect ere they make such an unwarranted and irresponsible assertion. How can a system which contains so accurate an account of the unions of bones and ligaments, anastomoses of nerves, veins and arteries, etc., and which assures the world of the existence of three crores and a half of veins and arteries in the human body giving facts and figures thereof with such mathematical precision, be regarded as being unscientific?

It is certainly an undeniable fact that one of the colossal achievements of modern Western Medical Science is its Anatomy; but the point at issue is whether the process of laying open the structures of the body with the lancets, is at all a satisfactory method. For, is it not a fact that the finest and the

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minutest arteries of the skin are never disclosed, if the scalpel is used so recklessly to remove the skin all at once and not allowed to go deeper into the muscles to expose the minute branches of blood vessels and nerves that may happen to lie embedded therein? But, on the contrary, look at the process promulgated by Susruta for demonstrating practical Anatomy! Its originality and perfection beats hollow all the known methods, although it was discovered in almost the pre-historic age. The process prescribed by the Hindu system is as follows :—Cover a dead body with *Kusa* grass and place it at the edge of the water of a rivulet. After three days take it out carefully, and gradually take off the successive layers of the epidermis and dermis and of the muscles beneath by gently and lightly rubbing it over with a soft brush. Thus the smallest and the thinnest arteries, which have by this time swelled and obtained a distinct existence are made palpable everywhere even to the minutest.

The process is termed, as we have pointed before, **Avagharshana** by Susruta. The Western method might be an easier and a more off-hand one, but by no means precise.

Though the merit of discovering this mode of dissection is due to Susruta, we are all blind to it and call Hippocrates the father of Medicine! It is generally believed that with a view to further his researches and perfect his knowledge, it is Hippocrates who inaugurated the system of dissection of dead human bodies and he did the work secretly. Credulous people may lend a willing ear to such assertions but the fact is, that it was not till a century later that Hierophilus openly resorted to dissection of human bodies and thereby earned an undying fame in Europe, obliterating Susruta's name for ever, though, virtually speaking, he (Susruta) was the pioneer of dissection and figured in the world more than a millenium before the advent of Hippocrates and over eleven centuries prior to the age of Hierophilus.



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It would not, perhaps, be out of place here to mention that Dr. A. F. R. Hoernle, M. A., F. R. S., C. I. E., Ph. D., in his recent publication on Hindu Osteology, has proved it to the hilt, how systematic, scientific, unerring and exact were the researches of the ancient Hindus and what a mine of resplendent truths lay imbedded in them! We, in our Introduction of the first volume of this work, have tried to prove how very superb, salutary and supremely happy was the theory of Vāyu, Pitta, and Kapha promulgated by Susruta. There we have incidentally mentioned that the Science of Embryology was not unknown to the Hindu sages. In the present volume we mean to prove to a point that the main principles promulgated in the Anatomy, the Physiology and the Pathology of Susruta yield in no way to the principles on those subjects included by the modern Western Scientists and investigators. On the other hand, we boldly affirm that in the theories propounded by Susruta some two thousand years back there lies a fund of truths which might well throw a flood of light on the field of labour of the modern scientific men of the West. For is it not a fact that the theories of *Vamana* (causing to eject the contents of the stomach by mouth), *Virechana* (causing the evacuation of the intestines), *Nasya* (causing to inhale through the nose), *Anuvasana* and *Asthāpana* which, in ancient India, had earned the appellation of Pancha-Karma, and had gained universal prevalence, and were extensively practised by oriental physicians from time immemorial, have, of late, been hailed by the medical authorities of the day as the most approved and commended mode of treatment.

Sceptics who care not to examine and weigh solid facts, bluntly allege that the Ayurvedic system is not based upon experiment and observation—the key-stone of all true Science, and such being the case its Anatomy, Physiology, Pathology and Therapeutics are all erroneous. The suggestion, cruel and baseless as it is, originally emanated from an eminent Indian physician who has earned an un-



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enviable reputation by writing a Treatise on Hindu Materia Medica. He says :—"It (the Ayurvedic system) is built not so much upon experiment and observation as upon an erroneous system of Pathology and Therapeutics." But such an expression would not stand the light of day. Indeed none but the ancient Hindu sages did set a high value on experiment and observation, and where they did not claim some occult knowledge or intuition, it is upon these two that they mainly based all their knowledge.

The Materia Medica of the Hindus is really a marvel. Its description of the properties of drugs belonging to the animal, vegetable and mineral kingdoms, and of the articles of food essential to the maintenance of health and strength, its selection of the specific dietaries and elimination of what are prohibited in particular ailments are every day being found correct. The European preparations of Indian drugs and diets are corroborative evidence thereof. The theory adopted by the ancient Hindus as the basis of their investigation is that every substance, whether vegetable or animal, possesses five properties namely,—Rasa, Guna, Viryya, Vipāka and Prabhāva which lenses alone cannot reveal, nor the body's eye after observation and experiment made upon rats and rabbits. And those who have opportunities of studying and practising both the Eastern and Western Medical Science assert that the ancient Medical Science of the Hindus once reached the highest standard of excellence and perfection in Materia Medica, Therapeutics and Hygiene and was simply unrivalled and unapproachable, as it blended Philosophy with Science—the mind's eye with the body's eye.

A dispassionate examination of these facts (and such as can be multiplied to any extent), will convince an impartial reader that Ayurveda, as we find it described in Charaka Samhitā and Susruta Samhitā, if approached in a spirit of fairness and enquiry, might reveal the germs of not a few of the marvellous achievement of the present age in the domain of Medical Science and afford to the assiduous



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student a vast scope and varied materials for comparison between the Eastern and the Western systems, and render material help in improving upon the one with the aid of the other, and this to the benefit of the suffering humanity at large.

Lastly it is our prayer, that if Western Medical Science was ever anywise, directly or indirectly, benefited by the ancient Medical Science of the Hindus, it is but meet and fair that the former should come forward to render all possible aid to her parent Science, and that as it is almost dying now for want of aid and succour we look hopefully to our present benign Government in whose power lies the means of its complete regeneration.

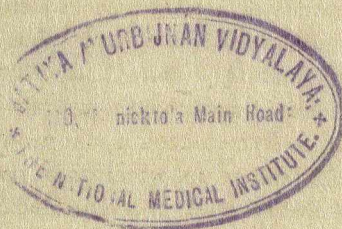
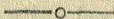
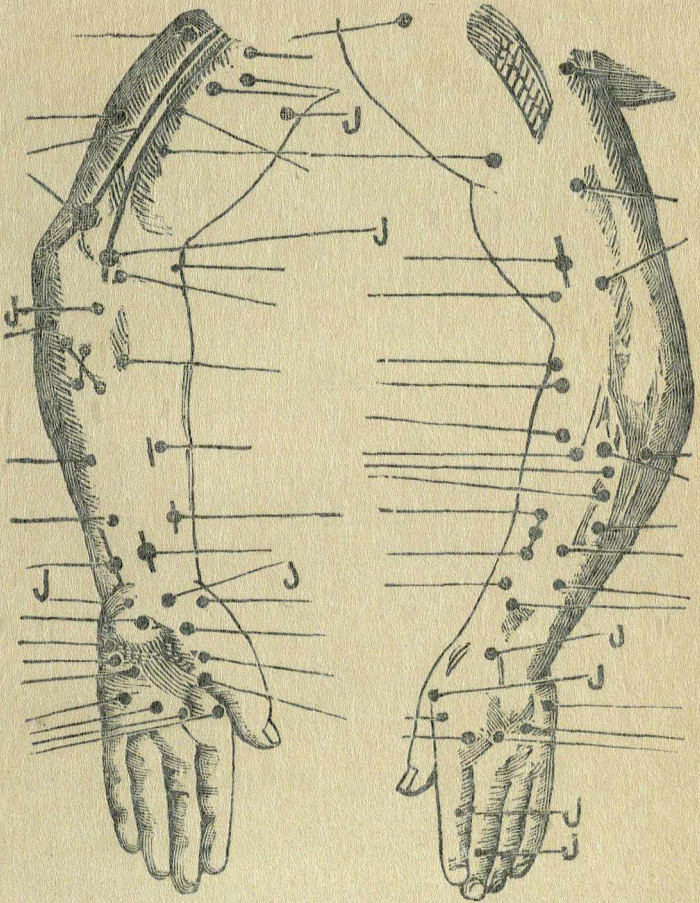


PLATE No. I.



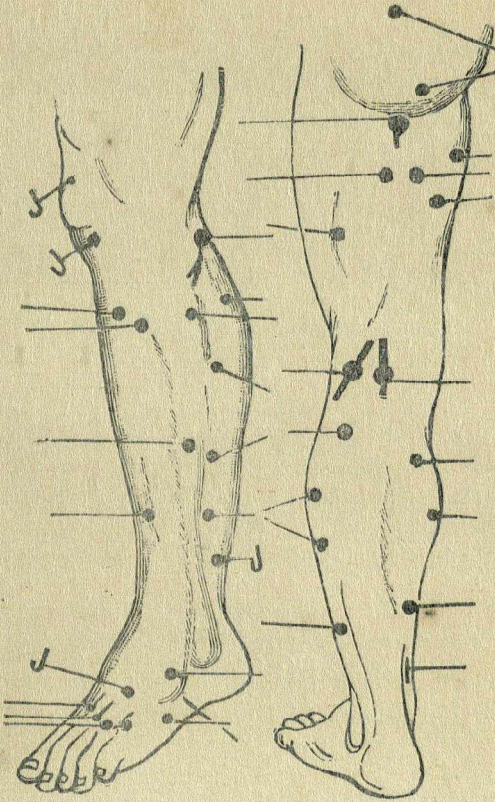
Vital points (Marmas) in the arm
(inner side).

Vital points (Marmas) in the arm
(outer side).

"J" indicates the points recognised in Juijutsu.

See Chapter VI, S'áirira-S'thána,

PLATE No. II.



Vital points (Marmas) in the leg
 (outer side).

Vital points (Marmas) in the back
 of the thigh and the leg.

"J" indicates the points recognised in Juijutsu.

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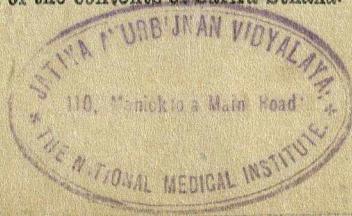
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CSL

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CSL

THE
SUSHRUTA SAMHITÁ
NIDÁNA STHÁNAM.

CHAPTER I.

Now we shall discourse on the **Vátavyádhi-**
(diseases of the nervous system) **Nidánam***.

Metrical text:—Having clasped the feet of the holy Dhanvantari, who had arisen out of the primordial ocean with the pitcher of ambrosia on his head, and who was the foremost of all knowers of truth, Sus'hruta interrogated him as follows :—"Tell me, O thou, the foremost of discourses, all about the different locations and functions of the bodily Váyu (nerve force), both in its normal and agitated conditions, (as well as when it changes its natural seat through a concourse of disturbing or aggravating causes). Instruct me on the nature of distempers, which result from its deranged condition." 2.

The holy Dhanvantari, the greatest of all healers, having listened to the foregoing words of Sus'hruta, replied as follows:—This vital Váyu (nerve force), which courses through the body, is self-begotten in its origin, and

* The term Nidánam, usually translated as Pathology, is meant to include factors, which fall within the respective provinces of Pathology, Ætiology, Symptomology and Pathognomy as well. For the meaning and functions of Váyu see Introduction vol. I. pp. xli.—xlii.



is regarded as identical with the divine energy of eternal life (God), inasmuch as it is unconditional and absolute in its actions and effects, eternal and self-originated, and is subtile and all-pervading (like the sky and the atoms). It is the primary factor, which determines the principle of cause and effect in all forms of created things, whether mobile or immobile. It is so called (Váyu) from the fact of its coursing (skr. Vá—to move) throughout the universe. It determines the growth, origin and disintegration of all animated organisms, and as such, it receives the homage of all created beings. Although invisible in itself, yet its works are patent or manifest. It is cold, light, mobile, dry and piercing, and follows a transverse course. It is characterised by the two attributes (proper-sensibles or Gunas) of sound and touch. It abounds in the fundamental quality of Rajas (principle of cohesion and action), is of inconceivable prowess, propels all the deranged or obstructing principles (Doshas) in the organism, (or in other words, is primarily concerned with the deranged principles of the body which are pathogenic in their actions). It is instantaneous in its action, and radiates or courses through the organism in constant currents. It has its primary field of action in the intestinal tract (Pakvádhána) and the rectum (Guda). In its deranged state, it is the principal factor, which, (in combination with the deranged Pittam and Kapham), lies at the root of all diseases, and is accordingly termed the king of diseases (Rogarát). 3.

The action of Váyu in its normal State:—Now, hear me describe the symptoms, which mark the Váyu, as it courses through the organism. The Váyu, in its normal or undisturbed condition, maintains a state of equilibrium between the different Doshas and the root principles of the body (Dhátu); it further

tends to maintain uniform state in the metabolism of the body, (protoplasmic, Agni*) and helps the organs of sense-perception in discharging their specific functions. The bodily Vāyu, like the Pittam in the organism, is grouped under five different subheads according to the difference in its functions and locations, and is classified as the Prāna, Udāna, Samāna, Vyāna and Apāna.† These five classes of Vāyu, located in their specific regions, contribute towards the integration and maintenance of the body. 4—6

The Prāna Vāyu:—The Vāyu, that courses in (governs) the cavity of the mouth,‡ is called the Prāna, its function being to force down the food into the cavity of the stomach, and to assist the different vitalising principles of the body (such as the internal heat or fire, etc.) in discharging their functions in life, and to contribute to the general sustenance of the body. A deranged condition of this particular kind of Vāyu (Prāna) is usually followed by hic-cough, dyspnœa and other kindred distempers. 7.

The Udāna Vāyu:—The most important of the vital Vāyus, which courses (sends its vibrations) upward, is called the Udāna. It produces speech, song, etc. In its deranged state it brings on diseases which are specifically confined to regions lying above the clavicles. 8.

The Samāna Vāyu:—The Samāna Vāyu courses in (governs) the stomach (Āmāshaya) and in the

* See Introduction Vol. I. p.p. XLVIII—XLIX Mahāmahopādhyāya Dvārkā Nātha Kaviratna interprets this Agni as digestive heat (*Jalharāgni*).

† The Prāna Vāyu is identical with the energy of the nerve centre in the medulla; the Udāna with that of the one which is situated in the speech centre. The Samāna is same as the energy of the epigastric plexus, the Udāna is same as the energy of the Motor-Sensory Nerves, and the Apāna is identical with the force of the Hypogastric plexus.

‡ The field of its action includes the regions of the heart, throat, head and the nose.



region of intestines (Pakvāshaya). Its functions consist in digesting the chyme brought down into the intestines in unison with the digestive ferment (Agni), and especially in disintegrating its essence from its refuse or excreted matter. A deranged or aggravated condition of the Samāna Vāyu causes dysentery, Gulma, and impaired digestion, etc. 9.

The Vyāna Vāyu :—The Vāyu known as the Vyāna courses (acts) through the whole organism, and its functions consist in sending the lymph chyle, etc. all through the body and in helping the out-flow of blood (Asrik) and perspiration. Five kinds of muscular movements* are ascribed to the action of the Vyāna Vāyu, a deranged condition of which is generally attended with diseases which are not confined to any particular region, member, or organ of the body, but are found to affect the whole organism (such as, fever, etc). 10.

The Apāna Vāyu :—The Vāyu known as the Apāna acts in the lower region of the intestines (Pakvādhāna). Its functions consist in bearing down the foetus and the faeces and in evacuating the urine, semen and catamenial blood. An enraged condition of this Vāyu tends to bring on serious diseases, which are peculiar to the urinary bladder and the distal portion of the large intestine (Guda). An aggravated condition of both the Vyāna and Apāna Vāyus may produce Prameha and disorders of the seminal fluid, while a simultaneous excitement of the five vital Vāyus leads to a sure and speedy termination of life. 11-12.

Now we shall describe the nature of diseases, brought about by the localization of the variously aggravated Vāyus in the different parts of the body.—In the cavity

* Such as expansion, flexion, lowering down and lifting up or lateral thrusting of any part of the body.

of the stomach (Āmāshaya) the deranged or aggravated Vāyu gives rise to vomiting, vertigo, epileptic fits, thirst and pain at the sides (Pārs'va Śūla) and about the region of the heart (Hridgraha). In the intestines (Pakvāshaya) the enraged or disturbed Vāyu gives rise to a rumbling in the intestines, a piercing pain about the region of the umbilicus, scanty and painful urination and stool, or their entire suppression (Ānāha), and pain about the region of the coccyx (Trika). 13—15. Similarly, incarcerated in the sense-organs, such as the ears, etc. it tends to deprive them of their respective faculties. In the skin (lymph chyle) it produces a discolouring of the complexion, parchedness and twitching in the skin, and causes a complete local anæsthesia, giving rise to a tingling, piercing pain in the skin, which spontaneously bursts, or becomes marked with cracks and fissures. Similarly, the aggravated Vāyu interfering with the principle of blood gives rise to ulcers. In the flesh, it produces painful nodes and tumours (Granthi), while in the principle of fat it brings on almost painless tumours (Granthi) unattended with any kind of ulcer. Incarcerated in the veins &c. (Sirā) it produces a stiffening or painful contraction, or a varicose or neuralgic condition; in a ligament (Snāyu), it produces numbness (anæsthesia), palsy, aching pain and convulsive jerks; in a long joint, it tends to deprive it of its contractibility and produces a painful inflammatory swelling (about the affected part). In the bones it produces a wasting (atrophy) of the bones which crack and begin to spontaneously burst, attended with the characteristic bone-ache. Again in that important principle of life, the marrow, it tends to dry it up and produces a sort of pain, extending all over the body which knows no respite or abatement. Similarly, in the principle of semen it tends to produce a scanty,



defective, or excessive emission of that vital fluid, or a complete stoppage thereof. 16—23.

The Vāyu, thus disturbed and agitated, affects in succession the lower and the upper extremities of the body, and the head, or extends all over the body and deranges all its root-principles (Dhātu). The symptoms, which mark such conditions of the body, are numbness (paralysis), convulsive contortions of the limbs (Akshepa), anæsthesia, and various kinds of pain (Śula), and swelling (Śopha) of the body. The deranged Vāyu, having entered the natural seats of the Pittam or Kapham, develops symptoms, which are peculiar to either of them, and gives rise to numerous diseases. 24—25.

The symptoms, which characterise the union of the deranged Vāyu with the Pittam (in its particular seat) are a burning sensation, heat, thirst, and loss of consciousness, in addition to the symptoms of the Vātaja disease so generated in that particular part of the body, while a similar unison with the Kapham develops coldness, swelling and heaviness (of the affected part). The disturbed or agitated Vāyu in unison with the principle of blood gives rise to a sort of pricking pain (pins and needles in the affected locality), which can not bear the least touch, or is marked by complete anæsthesia, and symptoms, peculiar to the deranged Pittam, follow in its train. 26—28.

Vomiting, and a burning sensation, etc. in the body, mark the instance when the Prâna Vāyu is surcharged (Āvrita) with the Pittam; while weakness, lassitude, somnolence, and a general discolouring of the complexion (D. R.,—loss of taste) characterise a case when it is surcharged with the deranged Kapham. A burning sensation in the body, loss of consciousness or epileptic fits, and a sense of giddiness (vertigo) and

physical languor are the indications, which distinguish a case of the Udāna Vāyu being surcharged with the Pittam ; while a stoppage or absence of perspiration, appearance of goose-flesh on the skin, impaired digestion, coldness and numbness of the affected part characterise a case of the same being surcharged with the Kapham. 29—32.

Copious flow of perspiration, heat with a burning sensation in the body, and epileptic fits indicate a case when the Samāna Vāyu has become united with the Pittam ; while a copious flow of stool and urine, and an excess of mucous secretion (Kapham) from the nose (fluent coryza) etc. and horripilation mark a case, where it has become saturated with the Kapham. 33—34.

Heat and a burning sensation in the affected part and a profuse menorrhagia mark a case when the Apāna Vāyu becomes surcharged with the Pittam, whereas a sense of heaviness in the lower limbs characterises a case when it becomes overcharged with the Kapham. 35—36.

[Symptoms such as,] burning and jerking in the limbs, and a sense of physical languor become manifest in the event of the Vyāna Vāyu being surcharged with the Pittam, while a general heaviness of the limbs, stiffness or numbness of the bone-joints, and an incapability of locomotion indicate the fact of its being surcharged with the Kapham. 37—38.

The Nidānam of Vāta Raktam :—

An over-indulgence in grief, excessive sexual intercourse, inordinate physical exercise, drinking large quantities of wine, observance of a regimen of diet and conduct in a particular season of the year which is improper to it, use of articles of food which are not congenial to one's own temperament and an improper or



baneful use of such oleaginous substances (as oil, clarified butter etc.) are the factors, which vitiate in common the blood and Pittam of a person. The foregoing causes especially tend to vitiate or agitate the Váyu and blood in persons of delicate constitutions, or in corpulent persons, or in those who observe a form of perfect continence. 39.

The vital Váyu becomes enraged or agitated by excessive riding on horses, camels or elephants, or through the lifting or carrying of great weights, etc., or by an inordinate indulgence in things which are possessed of the specific virtue of enraging or aggravating that vital principle. On the other hand, an over-indulgence in such articles of food as are heat-making in their potency, or a surfeit of edibles largely composed of sharp, acid or alkaline substances, as well as a large consumption of potherbs etc., or an exposure to heat tends to vitiate the blood of the organism, and which, on account of such contamination, tends to speedily obstruct the passage of the fleet-coursing Váyu. The Váyu, thus impeded in its course, becomes more and more agitated each moment, and is prone to speedily agitate the blood in a similar way. The antecedence of the term "Váta" or "Váyu" in the nomenclature of the disease (Váta-Rakta) is owing to the precedence accorded to the action of the deranged Váyu in bringing about the malady, although it effects this in concert with the vitiated blood of the organism. 40.

Similarly, the disease brought about by the agitated Pittam, in conjunction with the vitiated or agitated blood, is called the **Pitta-Raktam**, while the one incidental to the combination of the deranged Kapham with the vitiated blood is called **Kapha-Raktam**. In a case of **Váta-Raktam**, the legs, or the lower extremities can

not bear the least touch (Hyperæsthesia) and a sort of pricking, piercing pain (pins and needles) is experienced in those regions. The legs become withered or atrophied and lose all sensibility to touch. In a case of **Pitta-Raktam**, the legs become extremely red, hot, soft and swollen, characterised by a sort of indescribable burning sensation. In a case of **Kapha-Raktam**, the legs become swollen and numbed. The swelling assumes a whitish hue and feels cold to the touch, and is accompanied by excessive itching. In the Sānnipātika or Tridoshaja form of **Dushta-Raktam**, the legs exhibit symptoms, which are respectively peculiar to all the three preceding types. 41—43.

Premonitory Symptoms:—In the incubative stage of the disease the legs perspire and become cold and flabby, or (on the contrary), the local perspiration is stopped and the legs become hot and hard. Moreover, a pricking pain is experienced in the affected parts which are marked by complete anæsthesia, heaviness, or heat, and discolouring of the skin. The disease creeps in either from the lower extremities, or in some cases, first affects the upper ones and gradually extends all over the body like an enraged rat-poison.

Prognosis:—The form of the disease in which the skin of the part lying between the instep and the knee-joint becomes abraded or spontaneously bursts open, exuding pus and blood, attended with loss of strength (Prāna) and flesh, curvature of the fingers, and eruptions of nodules, should be regarded as incurable; while a case of one year's standing admits only of palliative measures. 44.

The enraged or agitated Vāyu, while coursing swiftly through the Dhamanis (nerves) of the body, shakes it in quick succession, and a disease, (exhibiting such



symptoms as shaking or convulsive jerks), is originated which is called **Ākshepaka*** (spasms, convulsions). The form of the disease, in which the patient falls to the ground, at intervals, is called **Apatānaka** (Epilepsy without convulsions). The aggravated or agitated Vāyu, charged with an abnormal quantity of Kapham, sometimes affects and stuffs the entire nervous system, and gives rise to a form of disease, which is called **Dandā-patānakam**† (Epilepsy with convulsions), inasmuch as it deprives the body of its power of movement and flexibility, making it stiff and rigid like a rod (Danda). 45—46.

The disease but rarely yields to medicine and, is cured in rare instances only with the greatest difficulty; its characteristic symptom being a paralysis of the jaw-bone, which makes deglutition extremely difficult. The disease in which the enraged Vāyu bends the body like a bow is called **Dhanushtambha** (Tetanus). The disease admits of being divided into two distinct types accordingly as the body of the patient is curved internally (**Antarâyāma**, lit:—inwardly or forwardly extended, emprosthotonos), or externally (**Vahirâyāma**, lit:—extended or bent on the back, resting on his heels and occiput—Opisthotonos). When the extremely enraged and powerful bodily Vāyu (nerve-force), accumulated in

* The patient suffers from vanishings (*tāmyatê*) and loss of consciousness through the instrumentality of the enraged and aggravated Vāyu, hence the disease is so named—*Gayadāsa*.

† Jejjada holds that the enraged Vāyu, in unison with the deranged Kapham, gives rise to another kind of convulsions (Ākshepaka) which he has denominated as Dandā-patānakh which, exhibits such symptoms as coldness, swelling and heaviness of the body on account of its being brought about by a concerted action of the deranged Pittam and Kapham. Several authorities aver that there are four distinct types of Ākshepakah, such as Dandā-patānakh, Antarâyāmah, Vahirâyāmah, and Ākshepakh of traumatic (Abhighâtaja) origin.



the regions of the fingers, insteps, abdomen, chest, heart and throat, forcibly draws in the local ligaments (Snáyu), the body becomes contracted and bent forward, bringing about a curvature of the inner trunk. The disease in this form is called **Antaráyāma Dhanushtambha**. The movements of the eyes become impossible, which become fixed in their sockets; the jaw-bones become paralysed, the sides are broken, and the patient ejects (at intervals quantities of) slimy mucous (Kapham). These are the features which mark the first type (Antaráyāma Dhanushtambha). On the contrary, when the same enraged Váyū, centred or lodged in ligaments which traverse the posterior side of the body, attracts them violently, the body is naturally bent backward. The patient experiences a sort of breaking pain at the chest, waist and thighs, (which are ultimately broken). The disease is called **Vahiráyāma**, and should be looked upon as beyond the pale of all medicinal treatment. 47—50.

Four types of Ákshepakā are usually recognised in practice such as, the (1) one incidental to the concerted action of the enraged bodily Váyū and Kapham (2), the one brought about through the union of the enraged Váyū with the deranged Pittam, (3), the one due to the single action of the agitated Váyū (4) and the one due to any external injury or blow (Abhighátaja).* An attack of *Apatānakā* due to excessive hæmorrhage, or following closely upon an abortion or miscarriage at pregnancy (difficult labour), or which is incidental to an external blow or injury (traumatic), should be regarded as incurable. 51—52.

* Brahma Deva designated the four types of the disease, as *Apatānakā*, *Samsrishta Ákshepakā*, simple *Ákshepakā* and the *Abhighátaja* (traumatic).



The disease, in which the extremely agitated Váyu affects the nerve chains (Dhamanis) which spread either in the left or in the right side of the body, whether in the upward, downward, or lateral direction, making them lax and vigourless, and in which the joints of the other side of the body become useless and inoperative, is called **Pakshágháta** (Hemiplegia) by eminent physicians. The patient, the whole or half of whose body has become (almost) inoperative and lost all sensibility, but who retains his consciousness so long as there remains the least vestige of vitality in the affected part, suddenly falls down and expires. 53—54.

Prognosis:—A case of Pakshágháta (Hemiplegia), brought about through the single action of the enraged or agitated Váyu of the body, can be cured only with the greatest care and difficulty. A case of the same disease, engendered by the aggravated Váyu in conjunction with the deranged Pittam or Kapham, proves amenable to medicine (Sádhyā). It becomes incurable when caused through the waste of the root principles (Dhātu) of the body. 55.

Apatantrakah (Convulsions) :—The Váyu, aggravated (by its specifically exciting factors and principles) and dislodged from its natural seat or receptacle in the body in consequence thereof, courses upwards and finds lodgment in the regions of the head, heart and temples. It presses upon those parts and gives rise to convulsive movements of hands and legs, or at times bends them down.

Symptoms:—The patient lies with his eyes closely shut, or stares with a sort of fixed or vacant gaze, the eyes remaining fixed or immovable. The patient loses all perception, and groans. Respiration becomes difficult, or symptoms of temporary asphyxia

and unconsciousness set in. Consciousness and a normal condition of the organism return with the passage of the enraged Váyu from the heart, while on the other hand the patient relapses into unconsciousness simultaneously with the envelopment of the heart with that enraged and Kapha-saturated Váyu. This disease is called *Apatantrakah* and is ascribed to the action of the enraged Váyu surcharged with the deranged Kapham. 56.

Manyástambha:—The local Váyu, agitated through such causes as sleep in the day time, reclining with the neck on an uneven place or pillow, gazing upward for a considerable length of time, or looking aside in a contorted way, and enveloped in the deranged Kapham, gives rise to the disease known as *Manyástambha* (wry neck or torticollis). 57.

Arditam (Facial Paralysis):—*Pregnant women, mothers immediately after parturition (*Sutiká*), infants, old and enfeebled persons are most prone to fall victims to this disease*. It has been also known to result from excessive hæmorrhage or loss of blood. The local Váyu, extremely enraged or aggravated by continuous talking in an extremely loud voice, chewing of hard substances, loud laughter, yawning, carrying extremely heavy loads, and lying down in an uneven position on the ground, finds lodgment in the regions of the head, nose, upper lip, chin, forehead and the joints (inner cornea) of the eye, and produces the disease called *Arditam* by distorting the face.

Symptoms:—The neck and half of the face longitudinally suffer distortion and are bent. The head shakes; the power of articulating speech is lost, and the

* The portion of the text included within asterisks has been rejected by Jejjadácháryya as spurious.



eyes are distorted into a variety of shapes. The portions of the neck and the chin, as well as the teeth on the affected side become painful.

Premonitory Symptoms:—The disease generally commences with shivering, horripilation, cloudiness of vision, upcoursing of the bodily Váyu and anæsthesia, a pricking pain in the affected locality, numbness or paralysis of the jaw-bone, or of the cervical muscles of the neck. Physicians, conversant with the *Ætiology* of diseases, call it *Arditam* (Facial paralysis).

Prognosis:—A case of *Arditam*, appearing in an extremely enfeebled or emaciated patient, or exhibiting such symptoms as a winkless vision, inarticulate speech which hardly seems to come out of the throat, excessive palsy of the face, as well as the one of more than three years' standing, should be deemed as incurable. 58.

Gridhras'i (*Sciatica*):—The disease in which the two great nerve-trunks (*Kandarà*), which emanating from below the lower extremity of the thigh reach down to the bottom of the insteps and toes, and become stuffed or pressed with the enraged Váyu, thus depriving the lower extremities of their power of locomotion, is called *Gridhras'i*. 59.

Vis'vachi (*Erbe's paralysis or Bracial neuralgia*):—The disease in which the enraged Váyu affecting the nerve-trunks (*Kandarà*) which run to the tips of fingers from behind the roots of the upper arms, making them incapable of movement and depriving them of their power of flexion or expansion is called *Vis'vachi*.* 60.

Kroshtukas'irsha (*Synovitis of the knee-joints*):—An extremely painful swelling in the knee-

* When the aforesaid nerve of a single arm is affected the disease is restricted to it alone, while it attacks the both when both their nerves are affected.

joints, which is originated through the concerted action of the deranged Vāyu and the vitiated blood is called Kroshtukaśirsha from the fact of its resembling the head of a jackal (Kroshtuka) in shape. 61.

Khanja (Lameness):—The disease proceeds from the drawing up of the nerve trunks (Kandarā) of a leg by the deranged Vāyu lying about the region of the waist. When both the legs are similarly affected, the patient is called a **Pangu**. He, whose legs tremble before starting for a walk and who afterwards manages to go on limping is called a **Kalāya Khanja** one in whom the bone-joints become loose. 62—63.

Vāta Kantaka :—The local Vāyu, enraged by making a false step on an uneven ground, finds lodgment in the region of the ankle (Khudaka, instep according to others), thus giving rise to a disease which is called Vāta Kantaka. The burning sensation in the soles of the feet caused by the enraged local Vāyu, in conjunction with the deranged Pittam and blood, is called **Pāda-dāha**, which is generally seen to afflict persons of pedestrian habits. When the legs are deprived of all sensibility of touch, and a sort of tingling pain is experienced in them it is termed **Pādaharsha**, which is due to the deranged action of the Vāyu and Kapham. The disease in which the enraged local Vāyu dries up the normal Kapham lying about the shoulder-joints is called **Ansa-śhoshaka**. The form in which the aggravated local Vāyu contracts the nerves of the arms is called **Avavāhuka***. 64—67.

Vādhiryayam (deafness):—The disease occurs only when the deranged Vāyu, either singly or sur-

* The Ansa-shosha is due to the single action of the enraged Vāyu, while Ava-vāhuka is due to the concerted action of the deranged Vāyu and Kapham.



charged with the Kapham, stuffs the sound-carrying channels (Srota) of the ears. 68.

Karna s'ulam :—The disease in which the deranged Váyu causing a piercing pain in the regions of the cheekbones, head, temples and neck, gives rise to a sort of aching pain in the tympanum, is called Karna-s'ulam (otitis). The local Váyu, deranged and saturated with the Kapham stuffing the nerves (Dhamani) which conduct of the sound of speech, produces complete (in some cases partial) loss of the power of speech—*e.g.* **Muka** (dumbness), **Minmina** (nasal voice) and **Gad-gada** (indistinct speech). 69—70

A sort of pain, which (rising from the bowels or the urinary bladder and ranging downward) gives rise to a bursting sensation in the regions of the anus and the genitals, is called **Tuni**, whereas the one, rising upward from the preceding parts and extending up to the region of the intestines, is called **Prati-tuni**. A distension of the abdomen (Udara), attended with the incarceration of flatus (Váyu) and an intense pain and rumbling in its inside, is called **Ádhmánam** (Tympanites). When it first affects the stomach (Ámásáya) and is unattended with an oppressive feeling about the heart and pain at the sides, it is called **Pratyádhmánam**. The Váyu saturated with the deranged Kapham causes the preceding type of distemper. 71—74.

A knotty stone-like tumour (Granthi) of considerable density, whether fixed or mobile, and appearing below the umbilicus, and having an elevated shape which is always found to be extended in an upward direction, is called a **Vatásthilá**, (which) as its name implies, is due to the action of the local deranged Váyu. The tumour, thus formed, obstructs the emission of flatus and impedes the evacuation of fæces. A tumour of similar shape,



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appearing laterally or across the region of the abdomen (Jathara) and obstructing the passage of stool, urine and flatus (Vāta) is called a **Pratyashthilā**. 75—76.

Thus ends the first Chapter of the Nidāna Sthānam in the Sushruta Samhitā, which treats of the Nidānam of the diseases of the nervous system.

CHAPTER II.

Now we shall discourse on the **Nidānam** of **Ars'as** (Hæmorrhoids). 1.

Hæmorrhoids may be divided into six classes *viz* :—

- (i) *Vātajā* (due to the action of the deranged Vāyu),
- (ii) *Pittajā* (due to the action of deranged Pittam), (iii)
- Kaphajā* (due to the action of deranged Kapham), (iv)
- Raktajā* (due to the action of the vitiated blood), (v)
- Sannipātajā* (due to the concerted action of the deranged Vāyu, Pittam and Kapham) and (vi) *Sahajā* (congenital).

Pathology :—The deranged Vāyu, Pittam, etc. enraged by their specific aggravating causes, or by such acts or conduct as partaking of food composed of incompatible substances, eating before the previous meal has been digested, inordinate sexual intercourse, sitting on the haunches, excessive riding, and the voluntary suppression of any natural urging of the body, either severally or in combination of two or three Doshas, or vitiating the blood of a person, who observes no moderation in food and drink &c., become dislodged from their natural seats in the body [according to the law of Prasāranam (expansion and change of place by a deranged organic principle)] and are carried down through the large intestine (Pradhāna Dhamani) into the descending colon and getting lodged therein, give rise to growths of polypi or fleshy condylomata, which are known as **piles**. These growths chiefly appear in persons suffering from impaired digestion (Agni), and gain in size through friction with the wearing apparel, weeds, wood, lumps of clay or stone, or by contact with cold water. 3.

The lower end of the large intestine, which passes into the flexure of the rectum and measures four and



a half fingers in length, is called the Gudam (lit—the channel of fecal matter), the interior of which is provided with three spiral grooves. Each of these grooves or ring-like muscles lie a finger and a half apart, and are respectively known as Pravāhini, Visarjani and Samvarani, or the grooves of out-flow, defecation and closure of the anus (sphincter ani), covering a space of four fingers and having laterally an elevation of one finger's width. 4.

Metrical Texts :—These grooves are like the involuted indentures of a conch shell, situated one above the other, coloured like the palate of an elephant. A part of the channel, half a finger's width in length as it is usually measured from the outer hairy orifice of the rectum, is called the anus (Gudoushtha). 5—6.

The first of the aforesaid grooves or rings lies about a finger's width apart from the orifice of the anus.

Premonitory Symptoms :—A non-relish for food, a tardy and difficult digestion of food (brought into the stomach), acid eructations, a sense of weakness in the thighs, a rumbling sound in the intestines, emaciation of the body, frequent eructations, swellings around the eyes, a croaking sound in the intestines, cutting pain in the rectum (Guda), apparent indications of an attack of phthisis, jaundice, dysentery, cough, dyspnœa, vertigo, somnolence, excessive sleep, weakness of the organs (Indriya), are indications which predict the advent of this disease, and which become more marked with its progress. 7.

The Vātaja Type :—Piles, due to the action of the aggravated Vāyu, are non-exuding, rose-coloured, and uneven in their surface. They resemble the Kadamba flowers in structure and are either tubular or sharp-pointed like a needle, sometimes assuming the shape of



the wild Tundikeri flower. The stool of a hæmorrhoid patient of this type becomes excessively hard, and can be evacuated only in a sitting posture, with the greatest pain and difficulty. An excruciating pain is experienced in the regions of the waist, back, sides, anus, umbilicus and the genitals. Symptoms peculiar to Gulma, Ashthilá, enlarged spleen and abdominal dropsy add to the distress of the patient, whose skin, nails, eyes, teeth, face, urine and stool also assume a dark black colour. 8.

The Pittaja Type :—Piles, brought on through the action of the deranged Pittam, are slender, blue-topped, shifting in their nature, yellowish in their hue, or are coloured like shreds of liver, resembling in shape the tongue of the Śuka bird. They are thick at middle, like barley grains, or resemble the mouth of leeches and secrete a sort of slimy exudation. The stool is marked with blood, and the patient complains of a painful, burning sensation (in the rectum) at the time of defecation. Fever, with a burning sensation and thirst, and epileptic fits, supervene. The skin, nails, eyes, face, teeth, stool, and urine of the patient assume a yellow hue. 9.

The Kaphaja Type :—Piles, due to the action of the deranged Kapham, become white, are sunk about their roots, and are hard, round and glossy. They assume a greyish hue and resemble the teats of a cow or the stones of the Karira, or of a Panasa fruit. These piles do not burst, nor do they exude any sort of secretion. The patient feels an irresistible tendency to scratch the excrescences. The stools become copious in quantity and are charged with mucous (Śleshmá), resembling the washings of meat. Indigestion, fever with shivering (Śita-jvara), and heaviness of the head and œdema



with a non-relish for food are the symptoms which become manifest with the progress of the disease. The skin, finger nails, eyes, teeth, face, stool and urine of the patient also assume a white colour. 10.

The Raktaja Type :—Piles (hæmorrhoids), having their origin in the vitiated condition of the blood resemble the sprouts of the Vata tree in shape and are of the colour of red coral, or the seeds (dark red) of Gunja berry. They exhibit all the symptoms, which are peculiar to the Pittaja type of this disease. Pressed hard by the constricted fæces in their passage through the anus, they suddenly give rise to a hæmorrhage of vitiated (venous) blood, and symptoms characteristic of excessive bleeding are found to supervene. 11.

The Sannipāta Type :—In a case of hæmorrhoids due to the concerted action of the deranged Vāyu, Pittam and Kapham, symptoms characteristic of each of these *types* manifest themselves in unison. 12.

The Congenital Type :—Congenital hæmorrhoids (**Sahaja Arsās**) are usually ascribed to defects in the semen and ovum of one's parents and should be medicinally treated with an eye to the special deranged Doshas involved in the case. The polypi (in this type) are hardly visible and are rough and yellowish, with their faces turned inward. They are extremely painful. A person suffering from this type of piles gets thinner and thinner every day and eats but very little. Large veins (Sirā) appear on the surface of the body. The patient becomes irritable, the semen decreases in quantity, making the procreation of a small number of children possible only by him. The voice becomes feeble, the digestion is impaired, and disorders affecting the head



nose, ears and eyes follow. A croaking sound is heard in the intestines, attended with a rumbling in the abdomen. All relish for food vanishes and the region of the heart seems to be smeared with a kind of sticky paste (of mucous), etc. 13.

Authoritative verse on the subject :—

A qualified physician should undertake the medical treatment of hæmorrhoids which occur either about the outer or the middle groove of the rectum, (in as much as they prove amenable to medicine). A polypus, appearing about the innermost ring or groove of the rectum, should be treated without holding out any definite hope of cure to the patient. 14.

Lingárs'as (Fig warts or condylomatous growths about the genitals) :—The deranged and aggravated Váyu etc., finding lodgment in the genitals, vitiate the local flesh and blood, giving rise to an itching sensation in the affected localities. The parts become ulcerated (through constant scratching) and the ulcers become studded with sprout-like vegetations of flesh (warts), which exude a kind of slimy, bloody discharge. These growths, or excrescences generally appear on the inner margin, or on the surface of the glans penis, in the form of soft, slender vegetations of skin, resembling the hairs of a small brush (Kurchaka). These vegetations ultimately tend to destroy the penis and the reproductive faculty of the patient.

Bhagárs'as :—The deranged Váyu etc. of the body, lodged in the vaginal region of a woman, gives rise to similar crops of soft polypi in the passage. They may crop up isolated at the outset, and (by coalescing) may assume the shape of a mushroom or an umbrella, secreting a flow of slimy, foul-smelling blood.

The deranged Váyu, etc. may further take an



upward course, and finding a lodgment in the ears, nose, mouth and eyes may produce similar warts in those localities. Warts, which crop up inside the cavities of the ears, may bring on earache, dumbness, and a foul discharge from those organs, while those (cysts) cropping up in the eyes will obstruct the movement of the eye-lids, giving rise to pain and a local secretion and ultimately destroy the eye-sight. Similarly, such growths in the nostrils produce catarrh, excessive sneezing, shortness of breath, headache, nasal speech and the complaint known as *Putinasya*. Such vegetations cropping up in and about the lips, palate or the larynx, tend to make the speech confused and indistinct. When appearing in the mouth, they impair the faculty of taste, and diseases which affect the cavity of the mouth follow. The excited *Vyāna Vāyu*, united with the aggravated *Kapham*, produces a kind of hard papillomatous growths on the skin (about the anus) which are called the *Charmakilas* (*papillomata*).^{*} 15.

Authoritative verses on the subject :

—These *Charmakilas* may be attended with a kind of pricking pain through an excess of the deranged *Vāyu*, whereas those which have their origin in the deranged *Kapham* (lymphatics) assume a knotty shape and become of the same colour as the surrounding skin. On the other hand, they become dry, black or white, and extremely hard through an exuberance of the deranged local blood and *Pittam*. 16.

The symptoms of polypi, appearing in the neighbourhood of the anus, have been described in full, while the general characteristics of those, which are found to crop up around the genitals, have been briefly discoursed

* According to others, *Charmakilas* may crop up on the skin of any part of the body.



upon. An intelligent physician should ponder over the two groups of symptoms while engaged in treating a case of piles. A case of piles exhibiting symptoms peculiar to the two deranged Doshas is called the **Samsargajam**. Six distinct types of bio-Doshaja piles are known in practice.* 17.

Prognosis :—A case of piles due to the concerted action of the three deranged Doshas of the body, (with its characteristic symptoms) but partially developed, may be temporarily checked (Yápya). Cases, which are of more than a year's standing, as well as those in which the hæmorrhoids are due to the concerted action of the two Doshas (Samsargaja), or are situated in the middle groove of the rectum, may be cured but with the greatest difficulty. Cases of the Sannipátika or congenital (Sahaja) types should be given up as incurable. The Apána Váyu, in a person whose rectum is overrun with such polypus growths, tries to pass out through the anus, but is driven back upward, being obstructed in its passage by the vegetations, and then mixes with his Vyána Váyu, thus impairing (the five-functioned) fire (Pittam) in his body. 18-19.

* Such as (1) the one due to the concerted action of the deranged Pittam and Kapham, (2) the one incidental to the simultaneous derangement of the Váyu and the Kapham, (3) the one brought about through the disordered condition of the Váyu and blood, (4) the one due to the combination of the deranged Pittam and Kapham, (5) the one produced by the concerted action of the deranged Pittam and blood, (6) the one which results from the combined action of the deranged Kapham and blood.

Thus ends the second Chapter of the Nidánasthānam in the Sushruta Samhitā which deals with the Nidānam of piles.



CHAPTER III.

Now we shall discourse on the **Nidānam of As'-mari** (urinary calculi). 1.

The disease admits of being divided into four several types, such as the Vátaja, the Pittaja, the Kaphaja and the Sukraja (Seminal) concretions. An exuberance or preponderance of the deranged Kapham should be understood as the underlying cause of all invasions of this disease. 2.

General ætiology :—The Kaphah of a man, who neglects to cleanse (Samsódhana) the internal channels of his organism, or is in the habit of taking unwholesome food, enraged and aggravated by its own exciting causes, is carried into the urinary bladder. Here it becomes saturated with the urine, and gives rise to the formation of concretions or gravels in its cavity. 3.

Premonitory Symptoms :—An aching pain in the bladder, with a non-relish for food, difficulty in urination, an excruciating pain in the scrotum, penis, and the neck of the bladder, febrile symptoms, physical lassitude, and a goat-like smell in the urine are the symptoms, which indicate the formation of gravel in the bladder. 4.

Metrical Text :—The deranged Doshas involved in a particular case respectively impart their specific colour to the urine, and determine the character of the accompanying pain. The urine becomes thick, turbid, and vitiated with the action of the aggravated Doshas, and micturition becomes extremely painful. 5.

Leading Indications :—A sort of excruciating pain is experienced either about the umbilicus, or in the bladder, or at the median rapé of the





perineum, or about the penis, during micturition when gravel is forming in the bladder. The urine is stopped at intervals in its out-flow, or becomes charged with blood, or flows out twisted and scattered like spray, leaving a sediment of clear, sandy, red or yellow particles of stone, which resembles a Gomedha gem in colour. Moreover a pain is experienced in the bladder at the time of running or jumping or in swimming, or while riding on horseback, or after a long journey. 6.

The Śleshmās'mari :—Stone or gravel, originated through the action of the deranged Kapham, saturated with an excessive quantity of that Dosha by the constant ingestion of phlegm-generating (Śleshmala) substances, increases in size at the lower orifice of the bladder and ultimately obstructs the passage of the urine. The pressure and recoil of that incarcerated fluid on the walls of the urinary bladder gives rise to a kind of crushing, bursting, pricking pain in that organ, which becomes cold and heavy. A Kapha-originated stone or gravel is white and glossy, attains to a large size, to that of a hen's egg, and has the colour of the Madhuka flower. This type is called Śleshmās'mari. 7.

The Pittaja As'mari :—The Kapham charged (dried) with the deranged Pittam becomes hard (condensed) and large in the aforesaid way, and lying at the mouth of the bladder obstructs the passage of the urine. The bladder, on account of the flowing back of the obstructed urine into its cavity, seems as if it has been exposed to the heat of an adjacent fire, boiling with the energy of an alkaline solution. A kind of sucking, drawing and burning pain is experienced in the organ. This type of As'mari is further marked by symptoms which characterise Ushna-vāta (stricture). The concretion is found to be of a reddish, yellowish

black colour like the stone of the Bhallátaka fruit, or it is coloured like honey. This type is called Pittaja Aśmari. 8.

The Vátás'mari :—The deranged Kapham (mucus) inordinately saturated with the bodily Váyu, acquires hardness and gains in dimensions, and these lying at the mouth of the bladder obstructs the passage of the urine. The incarcerated fluid causes extreme pain in the organ. The patient constantly under severe pain gnashes his teeth or presses his umbilical region, or rubs his penis, or fingers his rectum (Páyu) and loudly screams. A burning sensation is experienced in the penis, and urination, belching and defecation become difficult and painful.* The concretions in this type of Aśmari are found to be of a dusky colour, rough, uneven in shape, hard, faceted and nodular like a Kadamva flower. This type is called Vátás'mari. 9.

Infants are more susceptible to an attack of any of the three preceding types of Aśmari, inasmuch as they are fond of day sleep or of food composed of both wholesome and unwholesome ingredients, and are in the habit of eating before the digestion of a previous meal, or of taking heavy, sweet, emollient and demulcent food. In children the bladder is of diminished size and poor in muscular structure. These facts contribute to the easy possibility of the organ being grappled (with a surgical instrument) and of the stone being extracted with the greatest ease in cases of infantile Aśmari. 10.

The Śukrás'mari :—Śukrás'maris or seminal concretions are usually formed in adults owing to the germination of semen in their organisms. A sudden or abrupt stoppage of a sexual act, or excessive coition tends to dislodge the semen from its natural receptacle

* Stool and urine can be voided only with the greatest straining.



in the body. The fluid thus dislodged, but not emitted, finds a wrong passage. The Váyu gathers up the fluid (semen), thus led astray, and deposits it (in a round or oval shape) at a place lying about the junction of the penis and the scrotum and dries up the humidity with which it is charged. The matter, thus formed, condensed, and hardened, is called the seminal stone (Sukrásmari), which then obstructs the passage of the urine, giving rise to pain in the bladder, painful micturition, and swelling of the scrotum. The stone vanishes under pressure in its seat*. 11—12.

Authoritative verses on the subject :—Concretions, sands and sediments found to be deposited in the urine in a case of Bhashma-meha are but the modifications, or attendant symptoms of a case of stone in the bladder (Aśmari). The same group of symptoms and the same kind of pain are exhibited and experienced in a case of gravel (*S'arkarā*) as in a case of stone (Aśmari) in the bladder. The local Váyu coursing in its natural direction helps the discharge of calculi (Aśmari) with the urine in the event of they being extremely attenuated in structure. Particles of a stone broken by the Váyu are called urinary calculi (*S'arkarā*). A pain about the cardiac region, a sense of weakness and lassitude in the thighs, a griping pain in the regions of the spleen and liver (Kukshi-sūla), a shivering sensation, thirst, hiccough or eructations, darkness or sallowness of complexion, weakness, emaciation with a non-relish for food and

* We can not but contemplate with admiration the fact that Sushruta was aware of the formation of seminal or spermatie concretions in the seminal vesicles through degenerative changes of spermatozoa and other secretions and their subsequent calcification as lately discovered by the savants of the West.—*Translator*

impaired digestion are the symptoms which are manifest in a gravel-patient. A gravel (*S'arkarā*) obstructed at the mouth of the urinary channel is detected by the following indications :—*viz.*, weakness, lassitude, emaciation, cachectic condition of the body, pain over the hepatic region (*Kukshi-sūla*), a non-relish for food, sallowness of complexion, hot and high coloured urine, thirst, pressing pain at the cardiac region and vomiting. 13.

The bladder is situated in the pelvic cavity, surrounded on its different sides by the back, loin (*Kati*), umbilicus, scrotum, rectum (*Guda*), groins and penis. This organ is provided with a single aperture or opening and lies with its mouth downward, covered with nets of nerves (*Sirā*) and ligaments (*Snāyu*), in the shape of a gourd. The organ is extremely thin in structure; and thus situated within the pelvic cavity, it is connected, through its mouth or external orifice, with the rectum, the penis, and the testes. It is also known by the name of *Malādhāra* (the receptacle of impure matter) and forms (one of) the primary seats of vital energy (*Prāna*)*. The urinary ducts (ureters) pass close by the large intestines (*Pakvāsaya*) and constantly replenish the bladder and keep it moist with that waste product of the system in the same manner as rivers carry their contributions of water into the ocean. These passages or ducts (which are two) are found to take their origin from hundreds of branches (or mouths *tubuli uriniferi*), which are not visible to the naked eyes, on account of their extremely attenuated structures and carry, whether in a state of sleep or wakening, the urine from below the region of the

* The text has *Prāntyatanam*, which means that an injury to the urinary bladder may be attended with fatal result.



stomach† (Amás'aya) into the bladder keeping it filled with this important fluid of the body, just as a new pitcher, immersed up to its neck in a vessel full of water, is filled by transudation through its lateral pores. 14.

In the same way the Váyu, Kapham and Pittam are carried into the bladder (through their respective ducts or channels), and in unison with the retained urine, give rise to the formation of stone, on account of the slimy character of the deposit produced. Stone is formed in the same way in the bladder as sediments are ultimately deposited from clear and transparent water at the bottom of a new pitcher which contains it. As the wind and lightning jointly condense the rainwater into hailstones, so the bodily Váyu and Pittam (heat) jointly contribute to the condensation of the Kapham in the bladder and transform it into stone.

The Váyu in the bladder, coursing in its natural downward direction, helps the full and complete emission of urine ; while coursing in a contrary direction, it gives rise to various forms of maladies such as, Prameha, strangury, as well as seminal disorders ; in short, it produces any urinary trouble to which the bladder may be subjected. 15.

† From the kidneys.

Thus ends the third Chapter of the Nidâna Sthânam in the Sushruta Samhitâ which treats of the Nidânam of urinary calculi.



CHAPTER IV.

Now we shall discourse on the **Nidānam** of **Bhagandaram** (fistula in ano and fistular ulcers). 1.

The deranged Vāyu, Pittam, Kaphah and Sannipātah (a simultaneous derangement of the three bodily Doshas) and extraneous causes (such as a blow etc.) give rise to the types of Bhagandaram known as Śataponaka, Ushtragriva, Parisrávi, Śamvukāvarta and Unmargi. The disease is so named from the fact that it bursts the rectum, the perineum, the bladder and the place adjoining to them (thus setting up a mutual communication between them). The pustules, which appear in this regions are called as Pidakás in their unsuppurated stage, while they are called Bhagandaram when they are in a stage of suppuration. A pain about the sacral bone and an itching about the anus, accompanied by a swelling and burning sensation, are the premonitory symptoms of this disease. 2.

The Śataponakah Type :—The Vāyu, excited, condensed, and rendered motionless by a course of unwholesome food, gives rise to a pustule within one or two fingers' length from the rectum (anal region, —Guda), by vitiating the flesh (areolar tissue) and blood (of the locality). It assumes a vermilion colour and is characterised by a variety of pricking, piercing pain. If neglected at the outset, the pustule runs into suppuration. Owing to its vicinity to the bladder, the abscess or the suppurated pustule exudes a kind of slimy secretion and becomes covered with hundreds of small sieve-like holes, through which a constant frothy discharge is secreted in large quantities. The ulcer, thus formed, seems as if it is being thrashed with a rod, pierced

with a sharp instrument, cut with a knife, and pricked by needles. The region of the anus cracks and bursts, and jets of urine, fecal matter, flatus (Vāta) and semen are emitted through these sieve-like holes. This type of fistula is called Śatapōnakah (Sieve-like fistula in ano). 3.

The Ushtra-grivah Type:—The enraged Pittam, carried down by the Vāyu (into the rectum) finds lodgment therein, and there gives rise to a small, raised, red pustule, which resembles the neck of a camel in shape, and is characterised by a varied kind of pain, such as sucking etc. The pustule, not medicinally treated at the beginning, runs into suppuration. The incidental ulcer seems as if it is being burnt with fire or alkali, and emits a hot, fetid discharge. Jets of urine, flatus (Vāta), fecal matter and semen flow out of the ulcer in the event of it not being healed up with proper medicinal remedies. This type is called Ushtragrivah. 4.

The Parisrávi Type:—The enraged Kaphah, carried down by the Vāyu (into the rectum) and lodged therein, gives rise to a white, hard, itching pustule in that locality, characterised by a variety of itching pains, etc. If neglected at the outset, it soon runs into suppuration. The incidental ulcer becomes hard and swollen, marked by excessive itching, and a constant secretion of slimy fluid. Jets of urine, fecal matter, flatus and semen are emitted through the ulcer in the event of it not being well cared for at the outset. This type is called Parisrávi. 5.

The Śamvukāvartah Type:—The enraged Vāyu, in conjunction with the aggravated Pittam and Kapham, is carried down, and finds lodgment (in the region of the rectum), giving rise to a pustule of the size of the first toe, and characterised by a piercing

pain, and burning, itching sensations etc. Such a pustule, neglected at the outset, speedily suppurates, and the incidental ulcer exudes secretions of diverse colours, characterised by a kind of whirling pain, which revolves about, in the direction of the involuted indentures (within the grooves of the rectum) such as are found within the body of a river or fresh water mollusc. This is called *Śamvukāvartah*. 6.

The Unmārgi Type :—Particles of bones, eaten with (cooked) meat by an imprudent, greedy, gluttonous person, may be carried down with the hard and constipated stool by the *Apāna Vāyu* (into the rectum), thus scratching or abrading the margin of the anus, or burrowing into the rectum in the event of their being evacuated. in improper directions through (transverse or horizontal postures). The scratch or abrasion is soon transformed into a fetid and putrid ulcer, infested with worms and parasites, as a plot of miry ground will soon swarm with a spontaneous germination of similar parasites. These worms and parasites eat away the sides of, or largely burrow into, the region of the anus, and jets of urine, fecal matter, and flatus (*Vāyu*) are found to gush out of these holes. This type of *Bhagandaram* is called *Unmārgi*. 7.

Authoritative verses on the subject :—A pustule, appearing about the region of the anus and characterised by a slight pain and swelling, and spontaneously subsiding, should be regarded as a simple pustule, which is of a quite different nature from a fistula in ano, which has contrary features (*i.e.*, invariably found to be attended with a violent pain and swelling etc., and takes a long time to heal). A *Fistula-pustule* crops up within a space of two fingers' width of the *Pāyu* proper (distal end of the



rectum), is sunk at its root, and attended with pain and febrile symptoms. Pain, itching and burning sensations are experienced about the anus after a ride in a carriage, or after defecation. The anus becomes swollen, and the waist painful in the premonitory stages of Bhagandaram. 8—9.

Prognosis :—Almost all the types of this disease (Fistula in ano) yield to medicine after a prolonged course of treatment, and are hard to cure, except the Sannipàtah and traumatic ones, which are incurable. 10.

Thus ends the fourth Chapter of the Nidâna Sthânam in the Sushruta Samhitâ, which treats of the Nidânam of Fistula in ano (Bhagandaram).



CHAPTER V.

Now we shall discourse on the **Nidānam** of **Kushtham** (cutaneous affections in general). 1.

Improper diet or conduct; especially ingestion of improper, unwholesome, indigestible, or incongenial food; physical exercise or sexual intercourse immediately after partaking of any oleaginous substance, or after vomiting; constant use of milk in combination with the meat of any domestic, aquatic or amphibious animal; a cold water bath after an exposure to heat; and repression of any natural urging for vomiting etc. are the factors which tend to derange and aggravate the fundamental principle of Vāyu in a person. The enraged or aggravated Vāyu, in combination with the agitated Pittam and Kapham, enters into the vessels or ducts (Sirá), which transversely spread over the surface of the body. Thus the enraged Vāyu deposits the Pittam and Kapham on the skin through the medium of their channels and spreads them over the entire surface of the body. The regions of the skin in which the aforesaid morbid diatheses are deposited become marked with circular rings or patches. The morbid diatheses (Doshas), thus lodged in the skin, continue to aggravate, and having been neglected at the outset, tend to enter into the deeper tissues and thus contaminate the fundamental principles (Dhátus) of the body. 2.

Premonitory Symptoms :—A roughness of the skin, sudden horripilation, an itching sensation in the surface of the body, excess or absence of perspiration, anæsthesia of the parts, a black colour of the blood, and a rapid growth and expansion of any ulcer (appearing on the body) are the symptoms which mark the premonitory stages of Kushtham. 3.



Classification :—[Diseases, falling under the group of Kushtham, may be divided into two broad subdivisions], viz.,—*Mahákushthas* (major) and *Kshudra* (minor) *Kushthas*, the first consisting of seven, and the second of eleven different types, aggregating eighteen in all. The *Mahákushthas* are classified as, *Aruna*, *Audumvara*, *Rishya-Jihva*, *Kapála*, *Kákanaka*, *Pundarika*, and *Dadru*. The minor or *Kshudra-kushthas* (*Lichen* and *Dermatitis*) are *Sthulárushkam*, *Mahákushtham*, *Eka-kushtham*, *Charmadalam*, *Visarpah*, *Parisarpah*, *Sidhma*, *Vicharchiká*, *Kitima*, *Pámá*, and *Rakasá*. All the types of *Kushtham*, whether major or minor, involve the action of the deranged *Váyu*, *Pittam* or *Kapham*, and are connected with the presence of parasites in those localities.* The preponderance of any particular morbid diathesis (*Dosha*) in any case of *Kushtham* should be looked upon as its originating cause. The type, known as *Aruna Kushtha*, is due to the action of the preponderant *Váyu*; *Audumvara*, together with *Rishya-Jihva*, *Kapála* and *Kákanaka*, to a preponderance of the deranged *Pittam*; while *Pundarika* and *Dadru* owe their origin to an excess of the deranged *Kapham*. These types of major or minor *Kushthas* are successively more extensive in their action and more incurable on account of their respectively invading a greater number of the bodily elements (*Dhátus*). 4—6.

Mahákushthas :—*Aruna-kushtha* owes its origin to an exuberance of the deranged *Váyu*. It is slightly vermilion-coloured, thin and spreading in its

* Certain authorities hold that, all types of *Kushtham* (cutaneous affections) to be of parasitic origin. The *Garuda Puranam* avers that, the parasites, which infest the external principles of the body, are the primary causes of cutaneous affections—*Kushthaika-hetavontarjdh shlemshajá udhya-sambhaváh*. Ch. CLXIX. 4.

nature. A sort of pricking, piercing pain (is experienced in the affected locality) which loses all sensibility to the touch. The type known as **Audumbara** is coloured and shaped like a ripe or mature *Audumbara* fruit and has its origin in the deranged Pittam. The type called **Rishyajihva** is rough and resembles the tongue of a Rishya (Deer) in shape and colour. The type known as **Kapāla** (*Macula cærulæ*) resembles a black (deep blue) Kharpara (baked clay). The **Kākanaka** type is characterised by a dark red and black colour like the seed of the *Gunja* berry. A sort of sucking and burning pain is experienced in the affected locality in all the four preceding types of the disease which are the outcome of the deranged Pittam. The whole diseased surface seems as if burning with fire, and emitting hot fumes. They are speedy in their origin and rapidly suppurate and break. All these types soon become infested with parasites. These are the general features of these forms of Kushthas. 7.

Pundarika:—The patches resemble the petals of a (full blown) lotus flower in colour, and **Dadru** (Ringworm) assumes the colour (faint blue) of an Atasi flower, or of copper. They are spreading in their nature and are found to be overspread with pustules. Both the Dadru and Pundarika types are raised, circular, and characterised by itching and take a considerable time to be fully patent. These are the general characteristics of Dadru and Pundarika. 8.

Kshudra Kushthas:—We shall now describe (the features of the diseases known as) **Kshudra-kushthas** (M. Text):—The type known as **Sthulārushka** appears about the joints. It is extremely thick at its base, is cured with the greatest difficulty, and is strewn over with hard pustules (Arungshi). In the type known



as of **Mahakushtham** the skin contracts, and with the bursting of the skin (a piercing pain is felt in the affected part), which loses all sensibility to the touch, accompanied by a general sense of lassitude in the limbs. In the **Ekakushtham** (Ichthyosis) type the skin assumes a reddish black colour. It is incurable. In the form known as **Charmadalam** (Hypertrophy of the skin) a burning, sucking, drawing pain is experienced in the palms of the hands and in the soles of the feet which become characterised with an itching sensation. The disease, which affects in succession the (organic principles of) skin, blood and flesh, and speedily extends all over the body, like Erysipelas, and is attended with a burning sensation (*Vidāha*), restlessness, suppuration and a piercing pain and loss of consciousness (epileptic fits), is called **Visarpa Kushtham**. The form in which a number of exuding pustules gradually extend over the surface of the body is called **Parisarpa Kushtham**. The type of the disease which is white and thin, and is characterised by itching and does not create any disturbance (in the patient), is called **Sidhma** (*Maculæ atrophicæ*). This form is generally found to restrict itself to the upper part of the body. **Vicharchikā** (Psoriasis) is characterised by excessive pain and itching and gives rise to extremely dry crack-like marks on the body [hands and feet]. The same form of malady attended with pain, burning and itching, and restricting itself solely to the lower extremities, is called **Vipādikā**. The type in which the eruptions exude (a kind of slimy secretion) and which are circular, thick, excessively itching, glossy and black-coloured is called **Kitima** (Keloid tumours). Small pustules or pimples characterised by an itching, burning secretion and appearing on the surface of the body are called **Pāmā** (Eczema). The preceding kinds of pimples attended

with burning vesicles, are called **Kachchus** and are found to be chiefly confined to the legs, hands and buttocks. A sort of dry and non-exuding pimples characterised by excessive itching and appearing all over the body, is called **Rakasa** (dry Erythema). 9-10.

The forms known as Sthulārushka, Sidhma, Rakasá, Mahákushtham and Ekakushtham should be considered as offspring of the deranged Kapham. Parisarpa-kushtham alone is due to the action of the deranged Váyu, while the remaining types (of minor Kushtham) owe their origin to the action of the deranged Pittam. 11.

Kilásam :—The disease known as Kilásam is but another form of Kushtham. It may be divided into three types according as it is brought about through the action of the deranged Váyu, Pittam or Kapham. The difference between Kilásam and Kushtham is that the former confines itself only to the Tvaka (the skin) and is marked by the absence of any secretion.* A case of Kilásam caused by the action of the deranged Váyu is circular, vermilion-coloured and rough to the touch. The affected part when rubbed peels off scales of morbid skin. A case of Kilásam, due to the action of the deranged Pittam, is marked by eruptions, resembling the petals of a lotus flower (in shape and colour), and are attended with an extremely burning sensation. In the type originated through the action of the deranged Kapham, the affected part (skin) assumes a glossy, white colour, becomes thick and is marked by an itching sensation. The form in which the eruptions or patches extend and become confluent, invading even the soles of the feet,

* A case of Kushtham has its primary seat in the blood and skin (of the patient), in which it lies confined during the period of incubation, after which it attacks the skin and secretes the characteristic secretion of the deranged Dosha involved in it.



the palms of the hands and the region of the anus, and in which the local hairs assume a red colour should be regarded as incurable. A case of Kilásham, which is the outcome of a burn (cicatrix) should be likewise considered as incurable. 12.

A preponderance of the deranged Váyu in a case of Kushtham (leprosy) is indicated by a contraction of the skin, local anæsthesia, a copious flow of perspiration, swelling, and piercing or cutting pain in the affected part, together with a deformity of the limbs and hoarseness. Similarly, an excess of the deranged Pittam in a case of Kushtham, should be presumed from the suppuration of the affected part, from the breaking of the local skin, from the falling off of the fingers, from the sinking of the nose and ears, from the redness of the eyes and from the germination of parasites in the incidental ulcer. An excessive action of the deranged Kapham, in a case of Kushtham, gives rise to itching, discolouring and swelling of the affected part which becomes heavy and exudes the characteristic secretion. The types, Pundarika and Kákanam, which are due to the germinal defect of the patient, are incurable, inasmuch as they involve (according to Dallana) the concerted action of the three simultaneously deranged Doshas from the very outset. 13.

Memorial verses :—As a tree, full grown in the course of time, has driven its roots, which derive their nourishment from the rain water, deeper and deeper into the successive strata of the soil, so this disease (Kushtham), first affecting and confining itself to the upper layers of the skin, will invade the deeper tissues and organs etc. of the patient, if unchecked until almost all the fundamental principles or elements Dhátus are attacked by its virus in the course of time. 14.



The symptoms of a case of Kushtham confined only to the serous (Tvaka) fluid of the skin are the loss of the perception of touch, a scanty perspiration, itching and discoloration and roughness of the affected part. The symptoms which manifest themselves when the disease is confined to the blood are complete anæsthesia, horripilation, absence of perspiration, itching and excessive accumulation of pus in the affected parts. The symptoms of Kushtham affecting only the flesh are thickness of the patches, dryness of the mouth, roughness and hardness of the patches which become covered with pustular eruptions and vesicles, and an excruciating pricking pain in, and numbness of, the affected part. The symptoms of (Kushtham) invading the principle of fat only are a fetid smell and an excessive accumulation of pus in the affected part and a breaking of the skin, exposing deep gashing wounds which soon become infested with parasites. The body seems as if covered with a plaster. Symptoms of (Kushtham) affecting only the bones and the marrow are a sinking (lit: breaking) of the nose, a redness of the eyes, loss of voice and the germination of parasites in the incidental ulcers. Symptoms of the disease restricting itself only to the principle of semen are a crippled state of the hands and distortion of the limbs, loss of the power of locomotion, spreading of ulcers and all the other symptoms peculiar to the preceding types of the disease. 15—20.

A child, which is the offspring of the contaminated semen and ovum of its parents afflicted with Kushtham, should be likewise regarded as a Kushthi. 21.

Prognosis:—A case of Kushtham appearing in a person of prudence and discretion and confined only to the serum (Tvaka), flesh and blood of his organism should be regarded as curable. A palliative treat-



ment is the only remedy in cases where the disease is found to invade the principle of fat ; whereas a case where the poison is found to have penetrated into any of the remaining organic principles should be given up as incurable. 22.

Wise men hold that, for killing a Brāhmana, or a woman, or one of his own relations, for theft, as well as for doing acts of impiety, a man is sometimes cursed with this foul disease by way of divine retribution. The disease reattacks a man even in his next rebirth in the event of his dying with it. Uncured Kushtham (leprosy) is the most painful, and most troublesome of all diseases. 23—24.

A Kushthi (leper), getting rid of this foul malady by observing the proper regimen of diet and conduct and by practising expiatory penances and by resorting to proper medicinal measures, gets an elevated status after death. 25.

Kushtham (Leprosy) is a highly contagious disease ; the contagion being usually communicated through sexual intercourse with a leper (Kushthi), or by his touch or breath, or through partaking of the same bed, and eating and drinking out of the same vessel with him, or through using the wearing apparel, unguents and garlands of flowers previously used by a person afflicted with this dreadful disease. Kushtham (Leprosy), fever, pulmonary consumption, ophthalmia and other Aupasar-gika disease (incidental to the influences of malignant planets or due to the effects of impious deeds) are communicated from one person to another. 26.

Thus ends the fifth Chapter of the Nidānasthānam in the Sushruta Samhitā which treats of the Nidānam of cutaneous affections (Kushtham).



CHAPTER VI.

Now we shall discourse on the Nidánam of **Pra-meha** (diseases of the urinary tracts). 1.

It may be prognosticated that an idle man, who indulges in day sleep, or follows sedentary pursuits or is in the habit of taking sweet liquids, or cold and fat-making or emollient food, will ere long fall an easy victim to this disease. 2.

Pathology :—The bodily principles of Váyu, Pittam and Kaphah of such a person get mixed with improperly formed chyle of the organism. Thus deranged, they carry down through the urinary ducts the deranged fat, etc.* of the body and find lodgment at the mouth (neck) of the bladder, whence they are emitted through the urethra†, causing diseases, known by the (generic) name of **Prameha**. 3

Premonitory symptoms :—A burning sensation in the palms of the hands and of the soles of the feet, a heaviness of the body, coldness or sliminess of the skin and limbs, sweetness and whiteness of the urine, somnolence, lassitude, thirst, a bad-smelling breath, a shortness of breath, slimy mucous deposit on the tongue, palate, pharynx and teeth, clotted hair and an inordinate growth of the finger and toe nails are the indications which mark the advent of the disease. 4.

General Characteristics :—A copious flow of cloudy or turbid urine characterises all the types of the disease, which, together with the abscesses and eruptions (Pidaká) which mark its sequel, should be

* The particle "chá" in the text denotes either virus or morbid matter. Dallana.

† Remain incarcerated therein according to others.



regarded as involving the concerted action of the deranged Doshas (Vāyu, Pittam and Kaphah). 5.

The Kaphaja Types:—Cases of Prameha, which are caused by an exuberance of the deranged Kapham, may be grouped under ten subheads such as, *Udaka-meha*, *Ikshu-meha*, *Surā-meha*, *Sikatā-meha*, *S'ānai-meha*, *Lavana-meha*, *Pishta-meha*, *Sāndra-meha*, *S'ukra-meha* and *Phena-meha*. The ten aforesaid types are curable, inasmuch as the medicines which tend to remedy the deranged Kapham (Dosha), the cause of the disease, prove also remedial to the other principles of the body (flesh, marrow, blood, semen etc.) deranged (Dushya) from the same causes. 6.

The Pittaja Types:—The types, which are brought about through an exuberance of the deranged Pittam, are named as *Nila-meha*, *Haridrā-meha*, *Amla-meha*, *Kshārā'-meha*, *Manjishthā-meha*, and *S'onita-meha*. Palliation is all that can be effected in these types, inasmuch as the medicines which tend to correct the deranged Pittam, which has brought on the disease, fail to exert similar virtues on the organic principles (Dushyas) deranged by it. 7.

The Vātajaja Types:—The types of Prameha which are produced by an aggravated condition of the bodily Vāyu are divided into four subgroups, such as *Sarpi-meha*, *Vasā-meha*, *Kshoudra-meha* and *Hasti-meha*. These should be regarded as most incurable inasmuch as no kind of medicine can restore the fleet-coursing, deep diving (*i.e.* invading the bones and the marrow) Vāyu, which at the same time also augments the Pittam, to its normal state and thus advances (unchecked) in its work of disintegration. 8.

The deranged Kaphah, in conjunction with the (morbid) Pittam, Vāyu and fat, gives rise to all Kaphaja

types of Prameha. The deranged Pittam, in conjunction with the deranged Váyu, blood, fat and Kapham, produces the Pittaja ones; while the deranged Váyu, in unison with the deranged Kapham, Pittam, fat, marrow and Vasá (myosin), engenders the types of Vátaja Prameha. 9.

Symptoms of Kaphaja-Mehas:—The urine* of a person suffering from an attack of **Udakameha** becomes white and water-like and is passed without the least pain. In a case of **Ikshumeha** the urine resembles the expressed juice of sugarcane. It has the colour of wine in a case of **Surámeha**. The urine in a case of **Sikatámeha** is passed with pain and is found to leave a sediment of extremely fine and sand-like concretions (*Sikata's*). In a case of **Śanaimeha** the urine gushes out at intervals in jets and is charged with a slimy mucous (kaphah). The urine in a case of **Lavanameha** becomes limpid (non-viscid) and acquires a saline taste. There is horripilation at the time of micturition in a case of **Pishtameha** (Chyluria), the urine resembling a stream of water, charged with a solution of pasted rice (Pishtam).

In a case of **Sándrameha**, the urine becomes thick and turbid, while in a case of **Śukrameha** the urine resembles semen (or the urine is found to be charged with semen:—Mádhaba). In a case of

* The Sanskrit term Meha literally means to micturate. The verbal noun Mehanam signifies urination as well as the act of passing any morbid urethral secretion. Hence the urine in most of these cases denotes the fact of its being charged with pus or any other morbid secretion of the urinary organs such as Ojah (albumen), marrow, etc., which imparts their characteristic colours to the fluid,—a fact which determines the nomenclature of the disease and forms the keynote of its diagnosis in the *Āyurveda*.—Ed.



Phenameha the patient passes frothy urine in broken jets. 10.

Symptoms of Pittaja Mehas:—Now we shall describe the characteristic features of the types of Prameha, which are due to the action of the deranged Pittam. The urine in a case of **Nilameha** becomes frothy, transparent and bluish. The urine in a case of **Haridrāmeha** becomes deep yellow like turmeric (Haridrā) and is passed with a burning pain. The urine in a case of **Amlameha** acquires an acid taste and smell. The urine in a case of **Kshārameha*** resembles an alkaline solution filtered (through a piece of linen). The urine in a case of **Manjisthāmeha** resembles the washing of the Manjisthā, while in a case of **Raktameha**, the urine is found to be of blood-colour (or charged with blood—Mādhava). 11.

Symptoms of Vātaja-Mehas:—Now we shall describe the characteristics of the different types of Prameha, which are due to an exuberance of the deranged Vāyu. In a case of **Sarpimeha**, the urine looks like a stream of clarified butter, while in one of **Vasāmeha** it resembles the washings of Vasā. In a case of **Kshaudrameha**, the urine looks like honey and acquires a sweet taste. In one of **Hastimeha**, the patient passes a copious quantity of urine, like an excited elephant, at a time, and in one unbroken stream, (the organ becoming steady immediately after the act of micturition). 12.

Supervening symptoms:—The fact of the urine being assailed by a swarm of flies, lassitude, growth of flesh (obesity), catarrh, looseness of the limbs, a

* The urine acquires a distinct alkaline taste, smell, colour and touch. (Mādhava Nidānam).

† Charaka has included it within Kshaudra Meha and Madhu Me a.

non-relish for food, indigestion, expectoration of mucous, vomiting, excessive sleep, cough and laboured breathing (Śvāsa) are the supervening traits (Upadrava) of the **Kaphaja Prameha**. A piercing pain in the testes, a pricking (veda) pain in the bladder, a shooting pain (Tuda) in the penis, a griping pain at the heart, acid eructations, fever, dysentery, a non-relish for food, vomiting, a sensation as if the entire body is emitting fumes, a burning sensation in the skin, thirst, epileptic fits, insomnia, jaundice (Pāndu) and a yellow colour of the stool and urine are the supervening symptoms which mark the **Pittaja types** of Prameha. An oppressive feeling at the heart (Hridgraha), eager longings for foods of all tastes, insomnia, numbness of the body, fits of shivering, colic pain and constipation of the bowels are the supervening symptoms, which specifically mark the **Vātaja types**. Thus we have described the nature of the twenty different types of Meha with their supervening evils as well. 13-16.

The ten different types of Pidakā (abscess, carbuncles, pimples, pustules etc.) are found to crop up on the bodies of patients, suffering from Prameha, and abounding in fat and Vasā, and whose fundamental principles have been affected by the simultaneous derangement of the Vāyu, Pittam and Kapham. They are named as Śarāvika, Sarshapika, Kachchapika, Jālini, Vinatā, Putrini, Masurika, Alaji, Vidārika and Vidradhika. 17.

Metrical Texts :—An abscess which is raised at the margin and dipped in its centre, so as to resemble an Indian saucer in its shape is called **Sarāvika**. Pimples or pustules of the shape and size of white mustard seeds are called **Sarshāpika**. An abscess, resembling (the back of) a tortoise in shape and attended with a burning sensation, is called **Kachchapika** by the wise.



An abscess studded with slender vegetations of flesh and attended with an intolerable burning sensation is called **Jālini**. A large blue-coloured abscess (carbuncle) appearing on the back or the abdomen, and exuding a slimy secretion and attended with a deep-seated pain is called **Vinata**. A thin and extensive abscess (studded with slender pustules—D.R.) is called **Putrini**. Pimples to the size of lentil seeds are called **Masurika**. A dreadful abscess which is of a red and white colour, studded over with blisters or exuding vesicles is called **Alaji**. A hard and round abscess as large as a (full-grown) gourd is called **Vidārika**. An abscess of the Vidradhi type is called **Vidradhika** (carbuncle) by the wise. An incidental abscess in a case of Prameha should be regarded as having its origin in the same morbid principle (Dosha) as that which has produced the disease (Prameha) 18-28.

Prognosis :—A Pidakā, or an abscess, appearing about the region of the heart, anus, head, shoulder, back or at any of the vital joints (Marma) of the body, and attended with other supervening symptoms producing extreme prostration [impaired digestion—D. R.] in the patient should be abandoned as incurable. In a case of Vātaja meha, the deranged Vāyu presses all the fundamental principles out of the body through the urethra and rages rampant in the lower part of the body, united with the deranged fat, marrow and Vasa. Hence a case of Vātaja meha, (or its accompanying abscess), is held as incurable. 29-30.

A person in whom the premonitory symptoms (Purvarupam of Prameha) have appeared and who passes a little larger quantity of urine than usual, should be considered as already afflicted with it. A person afflicted with all or half of the premonitory symptoms of the disease and passing a copious quantity of urine

should be considered as one suffering from an attack of Prameha. 31—32.

A Prameha patient afflicted with deep-seated abscesses and other distressing symptoms, which are usually found to supervene in the disease, should be pronounced as suffering from Madhumeha and adjudged incurable. A Madhumeha patient seeks a halting place while walking, wants a place to sit on while halting, lies down if he finds a sitting place, and sleeps if he lies down. 33—34.

As five mixed colours such as grey, brown, Kapila (bluish yellow), Kapota (blackish grey), Mechaka (light-green) may be produced by combination of the five primary colours in definite proportions (such as white, green, black, yellow and red), so a diversity of causes, through the relative preponderance of the particular kinds of food, and of the deranged Doshas, root principles (Dhātu) and excretions of the body (Mala), may be attributed to the origin of Prameha. 35.

Memorial verses :—All types of Prameha, not properly treated and attended to at the outset, may ultimately develop into those of **Madhumeha** types, which are incurable. 36

For English equivalents of the different types of Prameha compare :—

Cystitis (Acute Infective)—Frequent, painful micturition, small quantity of urine voided with pain and urgency. Urine—slightly acid or alkaline in reaction, cloudy, containing blood corpuscles. Cystitis (Chronic Infective)—Great and frequent pain, in the lumbar region, rigor. Urine—thick, offensive and alkaline, containing ropy mucous and blood. Cystitis (Non-Infective)—Symptoms like those of acute inflammatory type. Urine—acid and cloudy with mucous. Blood is generally present in considerable quantity. Neuralgia of the bladder, compare Albuminuria, Albumosuria, Hæmoglobinuria, Hæmaturia, Peptonuria, Pyuria, Spermatorrhœa and Diabetes, Proteuria and Polyuria.

Thus ends the sixth Chapter of the Nidâna Sthânam in the Sushruta Samhitâ, which treats of the Nidânam of Prameha.



CHAPTER VII.

Now we shall discourse on the **Nidānam** of **Udara** (dropsy with an abnormal condition of the abdomen). 1.

Metrical Text :—The royal sage Dhanvantari, the foremost of all pious men who equalled in splendour and glory the lord of the celestials, thus blissfully discoursed on the Nidānam of Udara to Suśruta, the son of the holy Viśvāmītra, who devoutly approached him for that purpose. 2.

Classification :—This disease may be divided into eight different types, of which four are produced by the several actions of the three deranged **Doshas** of the body and their concerted action as well. Of the remaining types, two being known as Plihodara (including Yakritodara), and Vaddha-Gudodara (tympanites due to the constriction of the anus), the seventh Āgantuka (traumatic or of extraneous origin), and the eighth Dakodara (Ascites proper). 3.

Predisposing Causes :—The deranged Doshas of a person of extremely impaired digestion, addicted to the habit of taking unwholesome food, or of eating dry, putrid food, or of violating the rules of conduct to be observed in connection with oleaginous measures etc.,* are aggravated and find lodgment in the abdomen. Thus appearing in the shape of an abdominal tumour (Gulma), they give rise to this dreadful disease, attended with all its characteristic symptoms. The lymph chyle formed out of the assimilated food gets vitiated, and, impelled by the aggravated Vāyu, it percolates

* These include purgative, emetic, A'stha'panam and Anuva'sanam measures.

through the peritoneum in the same manner as a quantity of oil or clarified butter kept in a new earthen pot will transude through the pores of its sides. It thus gradually distends the skin (Tvak) of the abdomen. The process becomes general all through the abdominal region and the disease (Udara) is produced in consequence. 4—5.

Premonitory symptoms :—The precursory symptoms of the disease are loss of strength, complexion and appetite, emaciation of the muscles of the abdomen, appearance of veins on its surface, acid reaction of food closely following upon its digestion (Vidáha), pain in the bladder, and swelling of the lower extremities. The patient cannot ascertain whether his meal has been digested or not. 6.

The Vátaja, Pittaja, and Kaphaja Types :—A case of Udara in which the abdomen enlarges on its sides and posterior part, and is overspread with nets of black veins should be ascribed to the action of the deranged Váyu. A pain (Śula), suppression of the stool and urine (Anáha) and a cutting and piercing pain and flatulent rumbling in the intestines are the symptoms which likewise characterise this **Vátaja** form of Udara. A sucking pain in the abdomen, thirst, fever with a burning sensation, yellow colour of the swollen skin of the abdomen, on the surface of which yellow veins appear, yellow colour of the eyes, nails, face, stool and urine and the rapid increase of the dropsical swelling, are the characteristics of the **Pittaja Udara**. In a case of **Kaphaja** type the dropsical swelling is cold to the touch and becomes overspread with white-coloured veins. The abdomen seems heavy, hard, glossy and is extremely distended. The swelling slowly increases, and the fingernails and face of the patient become white, and he complains of a general lassitude. 7—9.



The Tridoshaja Type :—Evil-natured women (with a view to win the affections of their husbands or lovers sometimes) mix with their food and drink such refuse matters of their bodies as nails, hair, fæces, urine, catamenial blood etc. (which are supposed to be possessed of talismanic virtues). The three **Doshas** of the body, vitiated by such food or drink, or through imbibing any sort of chemical poison (Gara) administered by one's enemy, or by taking poisonous waters, or Dushi-Visha (slow poison whose active properties have been destroyed by fire or any antipoisonous medicine), will vitiate the blood and give rise to a kind of dreadful dropsical swelling of the abdomen, marked by the specific symptoms of each of them. The disease is aggravated in cold and cloudy days and a burning sensation is felt (in the inside of the abdomen). The patient becomes pale, yellow and emaciated, and is afflicted with thirst and dryness in the mouth, and loses consciousness at short intervals. This disease is also known as the dreadful **Dushyodaram**. 10.

Plihodaram.—(Spleen with dropsy of the abdomen) :—Now hear me describe the symptoms of Plihodaram. The blood and the Kapham of a person, deranged and aggravated through the ingestion of phlegmagogic food, or of those which is followed by an acid digestionary reaction (Vidāha), often enlarge the spleen, (which gives rise to a swelling of the abdomen). This disease is called **Plihodara** by the experts. Plihodaram protrudes on the left side of the abdomen, its characteristic symptoms being lassitude, low fever, impaired digestion, loss of strength, jaundice, weakness, and other distressing symptoms peculiar to the deranged Pittam and Kapham. A similar enlargement of the liver through similar causes on the right side of the abdomen is called **Jakriddalyudaram**. 11—12.

Vaddha-gudodaram* :—The fecal matter, mixed with the deranged Vāyu, Pittam etc. of the body, lies stuffed in the rectum of a person whose intestines have been stuffed with slimy food (as pot herbs) or with stones and hair (enteritis). They give rise to a sort of abdominal dropsy by swelling the part between the heart and the umbilicus which is called Vaddha Gudodaram. Scanty stools are evacuated with the greatest pain and difficulty and the patient vomits a peculiar kind of matter with a distinctly fecal smell (scybalous?). 13.

Parisrávi-Udaram :—Now hear me describe the causes and symptoms of the type of Udaram which is called **Parisrávi-udaram**. Thorny or sharp-pointed substances (such as fish-bones etc.), carried down with the food in a slanting way from the stomach into the abdomen, sometimes scratch or burrow into the intestines. Causes other than the preceding ones, (such as a long yawn or over-eating etc.) may contribute to the perforation of the intestines, giving rise to a copious flow of a watery exudation which constantly oozes out of the anus and to a distension of the lower part of the abdomen situated below the umbilicus. This is called Parisrávyudaram which is marked by a cutting pain and a burning sensation. 14.

Dakodaram :—Now hear me describe the causes and symptoms of the type known as **Dakodaram** (ascites). The drinking of cold water immediately after the application of an Aunvásanam or Ásthápanam enema, or closely following upon the exhibition of any purgative or emetic medicine, or just after the taking of a medicated oil or clarified butter, etc. tends to derange

* Dropsical swelling of the abdomen with tympanites due to the constriction of the rectum known as intestinal obstruction.



the water-carrying channels of the body. The same result may be produced by the drinking of oil, etc. in inordinate quantities. The water, by percolating or transuding through the walls of these channels, as before described, inordinately enlarges the abdomen, which becomes glossy on the surface and is full of water, being rounded about the umbilicus and raised like a full-bloated water-drum. The simile is complete as it fluctuates under pressure, oscillates, and makes a peculiar sound like a water-drum under percussion. 15.

Distension of the stomach, incapacity of locomotion, weakness, impaired digestion, œdematous swelling of the limbs, a general sense of lassitude and looseness in the limbs, suppression of flatus and stool, and a burning sensation and thirst are among the general characteristics of the disease in its various forms. 16.

Prognosis :—All cases of Udaram after the lapse of considerable time develop into those of ascites, and a case arriving at such a stage should be given up as incurable. 16—17.

Thus ends the seventh Chapter of the Nidāna Sthānam in the Sus'ruta Samhitā which treats of the Nidānam of Udaram.



CHAPTER VIII.

✓ Now we shall discourse on the Nidánam of **Mudhagarbham** (false presentations and difficult labour). 1.

Causes of Mudha-garbham :—Sexual intercourse during pregnancy, riding on horseback, etc., or in any sort of conveyance, a long walk, a false step, a fall, pressure on the womb, running, a blow, sitting or lying down on an uneven ground, or in an uneven posture, fasting, voluntary repression of any natural urging of the body, partaking of extremely bitter, pungent, parchifying articles, eating in inordinate quantities of Śákas and alkaline substances, dysentery (Atisára), use of emetics or purgatives, swinging in a swing or hammock, indigestion, and use of medicines which induce the labour pain or bring about abortions, and such like causes tend to expel the fœtus from its fixture. These causes tend to sever the child from the uterine wall with its placental attachment owing to a kind of Abhigátam (uterine contraction) just as a blow tends to sever a fruit from its pedicel. 2.

Definition :—The fœtus, thus severed and dislodged from its seat, excites peristalsis not only in the uterus, but induces a sort of constant, spasmodic contraction of the intestinal cavities (Koshthas), producing pain in the liver, spleen, etc. The Apána Váyu, thus obstructed through the spasmodic contraction of her abdomen, produces any of the following symptoms, viz. a sort of spasmodic pain in the sides, or in the neck of the bladder, or in the pelvic cavity, or in the abdomen, or in the vagina, or Anáha (tympanites with obstruction, etc.) or retention of urine,



and destroys the fœtus, if immature, attended with bleeding. In case the fœtus continues to develop and is brought in an inverted posture at the entrance to the vaginal canal, and is impacted at that place, or if the Apána Vāyu gets disordered and consequently cannot help the expulsion of the same, such an obstructed fœtus is called **Mudha-garbhah**. 3.

Classification and Symptoms:—Cases of Mudha-garbhah may be roughly divided into four different classes such as, the *Kilah*, the *Pratikhurah*, the *Vijakah* and the *Parighah*. The sort of false presentation in which the child comes with its hands, legs and head turned upward and with its back firmly obstructed at the entrance to the vagina, like a stake or a kila, is called **Kilah**. The sort of presentation, in which the hands, feet and head of the child come out, with its body impacted at the entrance to the vagina, is called **Prathikhurah**. The type in which only a single hand and the head of the child come out (with the rest of its body obstructed at the same place), is called the **Vijakah**. The type in which the child remains obstructing the head of the passage in a horizontal position, like a bolt, is called the **Parighah**. Certain authorities aver that, these are the only four kinds of Mudhagarbha. But we can not subscribe to the opinion (which recognises only four kinds of false presentations), inasmuch as the deranged Vāyu (Apána) can present the fœtus in various different postures at the head of the vaginal canal. Sometimes, the two thighs of the child are first presented, and sometimes it comes with a single leg flexed up. Sometimes the child comes with its body, bent double, and thighs drawn up, so that only breech is obliquely presented. Sometimes the child is presented, impacted at the head

of the passage with its chest, or sides, or back. Sometimes the child is presented with its arm around its head, resting on the side, and the hand coming out first. 6 Sometimes only the two hands are first presented, the head leaning on one side; 7 sometimes the two hands, legs and the head of the child, the rest of the body being impacted at the exit in a doubled up posture. 8 Sometimes one leg is presented, the other thigh being impacted at the passage (Páyu). I have briefly described these eight sorts of presentation of which the last two are irremediable. The rest should be given up as hopeless if these are attended with the following complications *vis.*, deranged sense-perception of the mother, convulsions, displacement or contraction of the reproductive organ (yoni) a peculiar pain like the after-pain of child birth, cough, difficult respiration, or vertigo. 4.

Memorial verses:—As a fruit, fully matured, is naturally severed from its pedicel and falls to the ground and not otherwise, so the cord, which binds the foetus to its maternal part, is severed in course of time, and the child comes out of the uterus (into this world of action). On the other hand, as a fruit, worm-eaten or shaken by the wind or a blow, untimely falls to the ground, so will a foetus be expelled out of its mother's womb, before its time. For four months after the date of fecundation, the foetus remains in a liquid state, and hence its destruction or coming out of the womb goes by the name of abortion. In the course of the fifth and sixth months the limbs of the foetus gain in firmness and density, and hence, its coming out at such a time is called miscarriage. 5-7. ✓

Prognosis:—The enceinte who violently tosses her head in agony (at the time of parturition) and the surface of whose body becomes cold, compelling



her to forego all natural modesty, and whose sides and abdomen are covered with nets of large blue-coloured veins, invariably dies with the dead child locked in her womb. The death of the foetus in the womb may be ascertained by the absence of movements of the foetus (in the womb) or of any pain of child-birth, by a brown or yellow complexion of the *enceinta*, cadaverous smell in her breath, and colic pain in the abdomen and its distension owing to the continuance of the swollen and decomposed child in the womb. 8-9.

The death of a child in the womb may result from some emotional disturbance of its mother, (such as caused by bereavement or by loss of fortune during pregnancy) ; while an external blow or injury (to the womb) or any serious disease of the mother may also produce the like result. A child, moving in the womb of a dead mother, who had just expired (from convulsions etc.) during parturition at term, like a goat (*Vastámára*) should be removed immediately by the Surgeon from the womb (by Cæsarean Section),* as a delay in extracting the child may leads to its death. 10-11.

* Cæsarean Section means incision of the uterus through the abdominal walls and extrication of the foetus therefrom. Operation like this upon a dead subject requires no skill of a surgeon. Any one can do it without the help of any anatomical knowledge. In modern times, when the mother's life is in peril, and the expulsion of the foetus becomes nearly impossible, by the natural passage, owing to an existence of deformity either in the parturient canal or in the forms and structures of the foetus, to save both mother and child this operation is principally undertaken.

The evidence of similar attempts, in ancient India, is found recorded in passages like what we have just translated and that the operation was practised on living subjects, there is not the least doubt about it. This custom is still preserved in Central Africa, and it is possible that the Egyptians like Hindu philosophy and religion learnt this also from the Hindus. "Felkin," says "Baas in his History of Medicine p. 70 "saw a case of the Cæsarean operation in Central Africa performed by a man. At one stroke

Additional Text.—The bladder is ruptured, the dead child lies like a weight upon the placenta and is pressed upward on the spleen, liver and gall bladder. The mother shivers and is oppressed with tremor, dryness of the tongue, dyspnoea and perspiration. She complains of a cadaverous smell in her breath and stands in danger of imminent death. By these symptoms a physician shall know the death of the child in the womb. This portion is partly recognised by Brahmadeva and is totally rejected by Jejjadáchárya as spurious.

an incision was made through both the abdominal walls and the uterus. The opening in the latter organ was then enlarged, the hæmorrhage checked by the actual cautery, and the child removed. While an assistant compressed the abdomen, the operator then removed the placenta. The bleeding from the abdominal walls was then checked. No sutures were placed on the walls of the uterus but the abdominal parietes were fastened together by seven figure-of-eight sutures, formed with polished iron needles and threads of bark. The wound was then dressed with a paste prepared from various roots, the woman placed quietly upon her abdomen, in order to favour perfect drainage, and the task of the African Spencer Wells was finished. It appears that the patient was first rendered half unconscious with banana wine. One hour after the operation the patient was doing well. And her temperature never rose above 101 F. nor her pulse above 108. On the eleventh day the wound was completely healed, and the woman apparently as well as usual."

When we read this evidence of Felkin, we are reminded of the operative steps as described in our own ancient book of Surgery from which modern surgeons have been able to borrow the operation of rhinoplasty. It is a great pity that while in Africa the same practice is still retained intact, we in India by spurious attempts and disgraceful contortions, substitutions of false readings and dismal knowledge of grammar and rhetoric try to prove in the face of strong evidence that in ancient India Cæsarean Section was attempted only on cases where one "might not perspire."

If we take विदग्धायाः in the sense of "a woman whose life is in great danger" and not exactly in the sense of "a woman who is dead" as recommended by Dallan and Arundutta (and which might have been the meaning if instead of विदग्धा a word like व्यापन्न had been used in the text), we find at once that Weber's remark in his History of Indian Literature p. 270 "that in Surgery they (the Hindus) attained to high proficiency" is not based on the solitary evidence of rhinoplasty alone.

In performing obstetric operations with success examples like this are not rare. If the two different readings वक्षमार and वक्षिहार be taken jointly into consideration we are impressed with the idea that in ancient



India Cæsarean operations were very frequently undertaken in cases of puerperal eclampsia, where the mother had been in the deplorable condition of a goat suffering from cramps and convulsions as well as in cases of an accidental death not unlike that which fell to the lot of the poor mother of him in whose name the operation is called. वस्तु=goat नार=destroyer (See Monier William's Dictionary) hence a goat-destroyer=a tiger or wolf) or in cases where the presence of deformity in the parturient canal or of malformation of the foetus prevented the natural delivery of a living child. The incision is not to be made anywhere else but exactly in the place where Felkin saw the illiterate Negro successfully apply his knife, the selection of वस्ति' द्वारञ्च as suggested by some commentators being a tempest on a tea pot especially when the subject is beyond the grave. In a living subject the selection of a proper site for the operation is of course very commendable. Hence we venture to suggest that extraction of the living foetus from the womb by making incision through this part of the pelvis was also attempted later on. We extract here the two different readings and leave our readers to judge whether we are correct to draw the above inferences.—Ed.

वस्तिद्वारे विपन्नायाः कुक्षिः प्रस्यन्दते यदि जन्मकाले ततः शौघं पाटयित्वोदरे-
च्छिद्यम् । Bāgabhata S'ārira Sthānam. ch. II. slo. 53.

वस्तुनार विपन्नायाः कुक्षिः प्रस्यन्दते यदि तत्क्षणाज्जन्मकाले तं पाटयित्वोदरे-
द्विषक ।

Thus ends the eighth Chapter of the Nidāna Sthānam in the Sus'ruta Samhitā, which treats of Nidānam of difficult labour and false presentations.



CHAPTER IX.

Now we shall discourse on the Nidánam of **Vidradhi** (abscess etc.). 1.

The blessed Dhanvantari, the honoured of the gods, who for the promulgation of the knowledge of the *Āyurveda* and for administering proper medicines (to the sick), took his birth at Kási, (Benares) as a king, thus fully discoursed on the symptoms of *Vidradhi* (abscess etc.) to his disciple, *Sus'ruta*. 2.

Definition and classification :—The extremely deranged and aggravated *Váyu*, *Pittam* and *Kapham*, resorting to the bone and vitiating the *Tvaka* (skin), blood, flesh, and fat of a person (with their own specific properties), gradually give rise to a deep-seated, painful, round or extended swelling which is called **Vidradhi** by the wise. The disease admits of being divided into six types such as the *Vátaja* type, the *Pittaja* type, the *Kaphaja* type, the *Sānnipātika* type, the *Kshataja* type (traumatic), and the *Asrija* (which has its seat in the vitiated blood). Now we shall describe their specific symptoms. 3-4.

The Vátaja Type :—This abscess assumes a black or vermilion colour, is felt rough to the touch and is characterised by a sort of excruciating pain. The growth and suppuration of the abscess are brought about in a variety of forms (owing to the variable and irregular action of the deranged *Váyu* involved in these cases). 5.

The Pittaja Type :—This abscess assumes a blackish yellow colour or one like that of a ripe *Audumvara* fruit. It is attended with fever and a burning sensation, and is of rapid growth and suppuration. 6.



The Kaphaja Type :—This abscess is shaped like an Indian saucer (s'arāva) and seems cold to the touch. It assumes a light yellow colour and is characterised by numbness, itching and little pain. The growth and suppuration of this abscess is very slow. The secretions from a Vātaja abscess are thin, those from a Pittaja type are yellow, while the exudations from a Kaphaja abscess are white. 7.

The Sānnipātika Type :—An abscess of the Sānnipātika type is of varied colour, and is attended with a varied sort of pain (sucking, drawing, turning etc.) and exudes secretions of various colours (white, yellow, etc.). It is little raised or elevated at its top, large and irregular in its shape and does not uniformly suppurate in all its parts. 8.

Agantuja or Kshataja Type :—The local or inherent heat of an ulcer, (caused by a blow or a dirt) in a person, addicted to unwholesome regimen, is augmented and conducted by the deranged Vāyu and vitiates the blood and Pittam, thus giving rise to a kind of abscess which is known as the Āgantuja Vidradhi (traumatic abscess). Symptoms of the Pittaja type likewise mark this type of abscess and fever, thirst and a burning sensation attend it from the very beginning. 9.

The Raktaja Type :—This abscess assumes a black or tawny colour, covered with a large number of black vesicles, and fever and an intolerable burning and pain attended with all the symptoms peculiar to the Pittaja type, mark the present form of the disease. It is called Raktaja Vidradhi. Of external Vidradhis or abscesses, those of the Sānnipātika type should be regarded as incurable. 10—11.

Antara-Vidradhi :—Now we shall describe the characteristic features of internal abscesses (Antara-

Vidradhi). The Vāyu, Pittam and Kaphah of the body, deranged through eating heavy, incompatible and incongenial (to the physical temperament of the eater) articles of food or of dry, putrid and decomposed substances, or by excessive coition and fatiguing physical exercise, or by voluntary repression of any natural urging of the body or through the eating of food which is followed by an acid reaction, either severally or collectively give rise to a tumour-like (Gulma), raised, or elevated abscess in the interior of the organism, which is often felt to be shaped like an ant-hill. 12-13.

Localities : — They are generally found to be seated at the mouth (neck) of the bladder, or about the umbilicus, or in the sides, or in the Kukshi (inguinal regions), or on the Vrikkas, or on the liver, or in the heart, or on the Kloma, or on the spleen, or in the rectum. Their general characteristics are identical with those of the several types of external abscess. The symptoms of their suppurated or unsuppurated stages should be determined in the light of the chapter on Āmapakvaishanyam (Ch. XVII Sutra.). 14-15.

Their specific symptoms : — Now hear me describe the symptoms which specifically mark these internal abscesses according to their seats in the different regions of the organism. An abscess appearing in the rectum (Guda) is marked by the suppression of the flatus (Vāta). Seated in the bladder, it gives rise to difficulty of urination and scantiness of urine. Appearing about the umbilicus it produces a distressing hic-cough and a rumbling sound (Ātopa) in the intestines. Seated in either of the sides (Kukshī) it tends to aggravate inordinately the vāyu of the body. Appearing in the inguinal region it gives rise to an extreme catching pain at the back and waist. Seated in either



of the **Vrikkas** it brings about a contraction of the sides. Appearing on the **spleen**, it produces symptoms of difficult and obstructed respiration. Seated on the **heart** it gives rise to an excruciating and piercing pain within its cavity and a drawing pain (Graha) extending all over the body (D. R.—cough). Seated in the **Liver** its characteristic indications are thirst and difficult breathing (D. R.—hic-cough) whereas a sort of unquenchable thirst is the symptom which marks its seat on the **Kloma**. 16-17.

Prognosis :—An abscess appearing on any vital part (Marma) of the organism, whether large or small in size, suppurated or unsuppurated, should be deemed as extremely hard to cure. Discharge from an abscess formed in the region of the organism above the umbilicus and (spontaneously bursting), will flow out through the mouth whereas similar secretions from down the umbilical region of (the abdomen), naturally find an outlet through the fissure of the anus. The case in which the secretions (pus etc.) find a downward channel and outlet may end in recovery of the patient whereas the one in which the secretions take an upward course invariably proves fatal. An incision made by surgeon from the outside into an internal abscess, other than the one situated on the heart, or on the bladder or on the umbilicus may occasionally, prove successful, but the one, seated on any of the preceding vulnerable viscera (heart, bladder etc.) of the body and surgically opened invariably ends in death. 18-19.

A woman, who has miscarried or has been even safely delivered of a child at term, may be afflicted with a dreadful abscess in the event of her taking injudicious and unwholesome food after parturition. The abscess in such a case, which is attended with extreme

hyper-pyrexia (Dáhajvara) should be considered as having had its origin to the vitiated blood (Raktaja Vidradhi) accumulated in the organism. The abscess, which appears in the Kukshi (in the iliac region) of a safely delivered woman owing to the presence of the unexpelled blood-clots in those regions after childbirth, should be also diagnosed as a case of Raktaja abscess. The unexpelled blood is called Makkalla. Such an abscess, if not absorbed in the course of a week, is sure to suppurate. 20 – 21.

Differentiating diagnosis of Gulma and Vidradhi* :—Now I shall discuss the features which distinguish a Gulma (internal tumour) from a Vidradhi (internal abscess). It may be asked, how is it that Gulma, (internal tumour) though caused by, and involving the co-operation of the same deranged Doshas as an internal abscess, does not suppurate, while the latter (Vidradhi) does run to suppuration ? 22—23.

The answer is that a Gulma (internal tumour), though caused by the same deranged Doshas as a Vidradhi (internal abscess), does not resort to any deranged organic matter, such as flesh, blood, etc., while, on the contrary, in a case of Vidradhi, the diseased flesh and blood of a locality are in themselves transformed into an abscess. An internal tumour (Gulma) is like a water bubble floating and moving about within a cavity

* A Gulma according to Sus'ruta does not suppurate, but the term "Api" (also) contemplates instances in which a Gulma may suppurate as in the case where it has got its basis in the deranged flesh etc. of the locality. Charaka asserts that retarded digestion of the ingested food followed by digestionary acid reaction, colic pain, insomnia with fever and a non-relish for food and a sense of oppression, etc. are the symptoms which indicate that suppuration has set in a Gulma, and he advises that it (Gulma) should be treated with poultices, etc.



of the body etc. without any fixed root of its own. Hence, it is that a Gulma (internal tumour) does not suppurate at all. Suppuration sets in in an abscess only because it largely contains flesh and blood unlike a Gulma (internal tumour) which is not formed of any such organic matter, and depends only on the aggravated Doshas giving birth to it. Hence, a Gulma does not suppurate at all. 24.

Incurable Types :—A case of an internal abscess suppurating about the heart, bladder or umbilicus as well as one of the Tridosha type (appearing in any part of the organism) should be given up as incurable. The abscess in which the marrow suppurates (generally) becomes fatal. The suppurating process in an internal abscess, which generally affects the underlying bone, is sometimes found to affect the marrow. The suppurated marrow, failing to find an outlet on account of the compactness of the local flesh and bone, produces a sort of burning sensation in the locality which consumes the body like a blazing fire. The disease confined to the bone, like a piercing dirt, torments the patient for a considerable length of time. An incision (made into the affected bone) is followed by the secretion of a fat-like, glossy, white, cold and thick pus. Men, learned in the knowledge of the Medicinal Śāstras, designate such an abscess as an Asthigāta-Vidradhi (abscess of the bone) which involves all the three kinds of deranged Doshas, and is attended with various kinds of pain which mark them respectively. 25-26.

Thus ends the ninth Chapter of the Nidānasthānam in the Sushruta Samhitā which treats of the ætiology of abscess.



CHAPTER X.

Now we shall discourse on the Nidánam of **Visarpa** (erysipelas), **Nádi** (sinus) and **Stana-roga** (diseases affecting the mammae of a woman). 1.

Definition of Visarpa :—The deranged and aggravated Doshas, (Váyu, Pittam and Kapham) having recourse to, and affecting the Tvaka (Skin), flesh and blood, speedily give rise to a sort of shifting, elevated swelling (Śótha) marked by the characteristic symptoms of any of them involved in the case. This swelling tends to extend all over the body. The disease is called **Visarpa** from the fact of its extending or swiftly shifting character (Skr. srip -to go, to extend). 2.

The Vátaja Type :—The swelling (Śótha) is soft and rough and assumes a black colour attended with an aching pain in the limbs and a cutting or piercing pain (in the affected locality). It is further marked by (all the usual) symptoms of the Vátika fever. A case of this type in which uneven flame coloured vesicles or bulbs appear on the affected part through the extreme vitiation (of the Váyu and Pittam) should be given up as incurable. 3.

The Pittaja and Kaphaja Types :—The Pittaja Visarpa (erysipelas) rapidly extends (over the body), attended with severe fever, a burning sensation, suppuration and cracking (of the skin). A large number of vesicles appears on the spot which assume a blood-red colour. A case of this type, characterised by the destruction of the local flesh and veins owing to the excessively aggravated condition of the deranged Doshas (Kapha and Pittam) and a



collyrium-like black colour (of the swelling), should be regarded as incurable. The **Kaphaja Visarpa** extends slowly and the process of suppuration is tardy. The affected part becomes white, glossy and swollen, and is marked by a slight pain and excessive itching. 4-5.

The Sānnipātika Type :—The Visarpa of the Tridoshaja type is deep-seated and the affected part assumes all colours and is attended with all sorts of pain which are peculiar to the three aforesaid types. The local flesh and veins are destroyed in the suppurating stage of this disease and hence, it should be looked upon as incurable. 6.

The Kshataja Type (Erysipelas due to a wound or an ulcer):—The Pittam of a person with a temperament marked by the extreme aggravation of all the three Doshas, in conjunction with the blood, resorts to a wound* in his body and immediately gives rise to Erysipelas (Śōpha—lit. rash) which assumes a reddish-brown colour, with high fever with a burning sensation, and suppuration in its train, and it is found to be covered with black vesicles to the size of *Kulattha* pulse. 7.

Prognosis :—The Vātaja, Pittaja and Kaphaja Visarpas are curable; the Sānnipātika and Khataja ones being incurable. The symptoms, which indicate an unfavourable prognosis in a case of Vātaja or Pittaja Erysipelas, have been described before. Those, which attack the vital parts (Marmas) of the body, can be cured only with the greatest difficulty.† 8.

* Or through the extreme augmentation of all the three doshas in the ulcer (Sādyah-kshata-Vrana) according to others.

† Golden coloured (yellow) Erysipelas due to the action of the (deranged) Pittam is incurable (*Pittātmā Kāñchana-vapuscha ta'hā na sydhyet.*).—D. R.



The Nádi-Vrana :—The pus of an abscess or swelling burrows into the affected part if a person neglects it in its fully suppurated stage, dubious of its being so conditioned, or not, or even neglects to open a fully suppurated abscess. An abscess or swelling is called a Gati Vrana owing to an excessive infiltration of pus, and it is also called a **Nádi-vrana** owing to the presence of a large number of recesses or cavities in its inside. There are five different types of *Nádi-vrana* (sinuses) such as the Vátaja, Pittaja, Kaphaja, Tridoshaja and Sályaja. 9—10.

The Vátaja, Kaphaja and Pittaja Types :—The **Vátaja Sinus** is rough and short-mouthed, characterised by an aching pain (in its inside). It exudes a sort of frothy secretion which becomes greater at night and is attended with an aching pain. Thirst, lassitude, heat and a piercing pain (in the affected locality) are the usual accompaniments of the **Pittaja types**. Fever is present from the beginning and the Sinus exudes a large quantity of hot and yellow coloured secretion which is more by day than by night. The **Kaphaja Sinus** becomes hard and is characterised by itching and a slight pain (numbed?). It is found to secrete a copious quantity of thick, shiny, white-coloured pus which becomes greater at night. 11-13.

Dvandaja and Tridoshaja Types :—A case of Nádi-Vrana involving the concerted action of any two of the deranged Doshas (Váyu, Pittam and Kapham) and exhibiting symptoms peculiar to both, is called a **Dvandaja*** one. There are three

* Gáyadása does not read the symptoms of *Dvi-doshaja* (i.e., due to two morbid principles) types of sinus as given in the text which he has rejected as spurious



types of this class of disease, (such as the *Vāta-pittaja*, *Vāta-kaphaja* and *Pitta-kaphaja*). A case of *Nādi-vrana*, exhibiting symptoms of the three aforesaid types, and attended with fever and a burning sensation, difficult breathing, dryness of the mouth and syncope, is called *Tridoshaja*. An attack of this type should be regarded as dreadful and fatal, casting around the gloom of death. 14-15.

The Śalyaja Nādi-Vrana :—A foreign matter (such as dirt, bone, splinter etc.), lodged within the body and invisible to the eye, tends to burst open the skin, etc. of the locality along its channel of insertion and gives rise to a type of Sinus. It is characterised by a constant pain, and suddenly and rapidly exudes a sort of hot, blood-tinged, agitated, frothy secretion. This type is called *Śalyaja*. 16.

The Stana-Roga :—These may be divided into as many types as the aforesaid *Nādi-Vrana* and are caused by the same exciting factors as the last named malady. The milk-carrying ducts remain closed in the breast of a nullipera thus barring the possibility of the descent of the Doshas through them and of an attack of any disease at that part of the body. On the contrary, such ducts in the breast of a primipara open and expand of their own accord, thus making the advent of diseases possible that are peculiar to the mamma. 17-19.

The breast-milk :—The sweet essence of the Rasa (lymph chyle) drawn from the digested food courses through the whole body and is ultimately concentrated in the breast of a mother or a woman (big with child) which is called milk. 20.

Its character :—The breast-milk, like semen, lies hidden and invisible in the organism, though

permeating it in a subtle or essential form. The characteristic features of the breast-milk bear analogy to those of semen. The breast milk is secreted, and flows out at the touch, sight or thought of the child in the same manner as the semen is dislodged and emitted at the sight, touch or recollection etc. of a beloved woman. As the strong and unclouded affections of a man are the cause of the emission of semen, so the fondest love of a mother for her children brings about the secretion of her breast-milk. Both semen and breast-milk are the product of the essence of digested food, this essence being converted into milk in women. 21—22.

Its abnormal and normal Traits:—

The milk of a mother vitiated by the deranged Vāyu of her system has an astringent taste and floats on water. The milk of a mother vitiated by the deranged Pittam has an acid and pungent taste and becomes marked with a yellow hue,* if left to float on water. The milk of a mother vitiated by the deranged Kapham is thick and slimy and sinks in water. The milk of a mother vitiated by the concerted and simultaneous derangement of the three Doshas of the body is marked by the combination of all the preceding symptoms. An external blow or hurt too (Abhighāta) sometimes produces vitiation of the mother's milk. 23.

* The milk (of a mother), which instantly mixes with water, tastes sweet and retains its natural greyish tint, should be regarded as pure. 24.

The bodily Doshas having recourse to the breasts of a woman whether filled with milk or not and vitiating the local flesh and blood give rise to mammary diseases,

* The particle "Cha" in the text indicates that the colour may turn blue or pink in some cases.



THE SUSHRUTA SAMHITA.

[Chap. K. **SL**]

(Stana-roga). All the types of abscess (Vidrādhi) excepting the one called the Raktaja out of the six types described before are found to attack the mammæ, and their symptoms should be understood as identical with those of external abscesses. 25.

Thus ends the tenth Chapter of the Nidānam Sthānam in the Sus'ruta Samhitā which treats of the ætiology and symptoms of Erysipelas, Sinus and mammary abscesses.

CHAPTER XI.

Now we shall discourse on the Nidānam of **Granthi** (Glands etc.), **Apachi** (Scrofula etc.), **Arvuda** (Tumours) and **Galaganda** (Goitre). 1.

The deranged and unusually aggravated Vāyu etc. (Pittam and Kapham), by vitiating the flesh, blood and fat mixed with the Kapham (of any part of the organism), give rise to the formation of round, knotty, elevated swellings which are called **Granthi** (Glandular inflammation). 2.

The Dosha-Originated Types :—The swelling (Sopha) of the **Vātāja** type seems as if it were drawn into and elevated or as if severed or pricked with a needle, cleft in two or drawn asunder or as if cut in two or pierced. The knotty growth assumes a black colour, and is rough and elongated like a bladder. On bursting a granthi of this type exudes clear bright red blood. The **Pittāja Granthi** is characterised by heat and an excessive burning sensation (in its inside). A pain, like that of being boiled by an alkali or by fire, is felt in the inside. The knotty formation assumes a red or yellowish colour and exudes a flow of extremely hot blood on bursting. The **Kaphāja Granthi** is slightly discoloured and cold to the touch. It is characterised by a slight pain and excessive itching, and feels hard and compact as a stone. It is slow or tardy in its growth and exudes a secretion of thick white-coloured pus when it bursts. 3-5.

The Medaja Type :—The fat originated Granthi is large and glossy and gains or loses in size with the gain or loss of flesh by the patient. It is marked



by a little pain and an excessive itching sensation and exudes a secretion of fat resembling clarified butter or a gruel, in colour and consistency, made of the levigated paste of sesamum on bursting. 6.

Sirā-Granthi—(aneurism or varicose veins) :—

The bodily Vāyu in weak and enfeebled persons, deranged by over-fatiguing physical exercises, straining or exertion or by pressure, presses on, contracts, dries or draws up the ramifications of veins (Sirā) or arteries (of the affected locality), and speedily gives rise to a raised knotty formation which is called a Sirā-Granthi. In the event of its being shifting and slightly painful, it can be cured only with the greatest difficulty. Whereas a case in which the knotty formation is painless, fixed, large and situated at any of the vital parts of the body (Marmas), should be deemed incurable.* 7.

Apachi—(Scrofula etc.) :—The augmented and accumulated fat and Kapham give rise to string of hard glossy, painless, nodular, or elongated granthi swellings) about the joints of the jawbones, at the waist, joint, about the tendons of the neck, about the throat or about the region of the arm-pits. These glands (Granthis) resembling the stones of the Āmalaka fruit or the spawn of fish in shape or like some other shape, are of the same colour as the surrounding skin ; and a string or a large crop of such glandular knots, gradually growing is called Apachi† on account of the extensive nature of their growth. 8-9.

* In several editions an additional line is to be found running as men well conversant with symptoms (of *Granthis*) recognise a type of Granthi due to the action of the deranged flesh and blood, which exhibits symptoms identical with those of a tumour (*Mansjra'srayam chārvuda laskhanena tulyām hi drishtamath lakshanajanih*). But Jejjata has rejected it as of questionable authority.

† These glandular formations appear about the root of the penis, about the sides, in the arm-pits and about the throat and the tendons of the neck.



These knotty formations are characterised by itching and a slight pain. Some of them spontaneously burst exuding secretions while others are observed to vanish and re-appear (in succession). Such vanishings, re-appearances, or fresh formations continue for a considerable time. The disease undoubtedly owes its origin to the deranged fat and Kapham, and may only be made amenable (to medicine) with the greatest difficulty lasting for years at a time. 10.

Arvuda—(tumour etc.) :—The large vegetation of flesh which appears at any part of the body, becomes slightly painful, rounded, immovable and deep-seated, and has its root sunk considerably deep in the affected part, and which is due to the vitiation of the flesh and blood by the deranged and aggravated Doshas (Váyu, Pittam and Kapham) is called an Arvuda (tumour) by the learned physicians*. The growth of an Arvuda is often found to be slow, and it seldom suppurates. The characteristic symptoms of an Arvuda which owes its origin to the deranged condition of the Váyu, Pittam, Kapham, flesh or fat, are respectively identical with those, which mark the cases of Granthis, brought about by the same deranged principles of the body. 11.

Raktaja—Arvuda :—The deranged Doshas (Váyu, Pittam and Kapham) contracting, compressing

They resemble spawns of fish in shape and size and are due to the action of the deranged Váyu, Pittam and Kapham. The appearance of such glands in the upper part of the body should be attributed to the action of the deranged and aggravated Váyu. They are extremely hard to cure in as much as their growth (formation) involves the concerted action of the morbid principles (Doshas) of the body.—**Bhoja**.

Charaka, who designates this disease as *Gandamúla*, describes its location in regions about the jawbones alone.

* That they having recourse to the flesh, produce deep-seated vegetations (of flesh) is the reading adopted by Gayádása and others.



and drawing the vessels (Śirā) and blood (of the affected part), raise a slightly suppurated and exuding tumour which is covered with small warts and fleshy tubercles and is called a **Raktārvuda**. This tumour is rapid in its growth and exudes a constant flow of (vitiated) blood. The complexion of the patient owing to depletive actions and other concomitant evils of hæmorrhage becomes pale and yellow. The type should be considered incurable on account of its having its origin in the blood.* 12—13.

Mānsārvuda :—The flesh of any part of the body hurt by an external blow etc. (hurting it with a log of wood—D.R.) and vitiated in consequence, gives rise to a sort of swelling (tumour) which is called **Mānsārvuda**, which originates through the action of the deranged Vāyu. It is glossy, painless, non-suppurating, hard as a stone, immobile, and of the same colour as the surrounding skin. Such a tumour appearing in a person addicted to meat diet becomes deep seated owing to the consequent vitiation of the bodily flesh and soon lapses into one of an incurable type. 14.

Prognosis :—Even of the aforesaid curable types (such as the Vātaja, etc.), the following types of Arvudam (tumours) should be likewise regarded as incurable, those which appear in the cavity of a Srota channel or an artery, or any vulnerable joint of the body and are characterised by any sort of secretion and also immovable, should be deemed incurable. An Arvudam (tumour) cropping up on one existing from before is

* Although all types of Arvuda have their origin in the deranged flesh and blood, preponderant action of the deranged blood is found in *Raktārvuda*, while a dominant action of the deranged flesh marks the *Mānsārvuda* type.



called **Adhyarvudam**, which should be likewise deemed as incurable. A couple of contiguous Arvudam (tumours) cropping up simultaneously or one after another is called **Dviarvudam**, which should be held as equally incurable (with one of the foregoing types). An Arvuda (tumour) of whatsoever type, never suppurates owing to the exuberance of the deranged Kapham and fat as well as in consequence of the immobility, condensation and compactness of the deranged Doshas (Vāyu, Pittam and Kapham) involved in the case, or out of a specific trait of its own nature. 15-16.

Definition of Galaganda (Goitre):—The deranged and aggravated Vāyu in combination with the deranged and augmented Kapham and fat of the locality affects the two tendons of the neck (Manyās) and gradually gives rise to a swelling about that part of the neck characterised by the specific symptoms of the deranged Doshas (Vāyu or Kapham) and principles involved in the case. The swelling is called Galganda (Goitre). 17.

Symptoms of the Dosha-originized Types:—The swelling or tumour in the **Vātaja** goitre is characterised by a pricking pain (in its inside) marked by the appearance of blue or dark coloured veins **Śirā** on its surface. It assumes a vermilion or tawny brown hue. The goitre becomes united with the local fat in course of time, and gains in size, giving rise to a sense of burning in the throat, or is characterised by the absence of any pain at all. A **Vātaja** goitre is rough to the touch, slow in its growth, and never or but rarely suppurates. A sense of dryness in the throat and the palate as well as a bad taste in the mouth likewise marks this type. The swelling in the **Kaphaja** Type assumes a large shape and becomes hard, firm, cold



and of the same colour (white). There is but slight pain and the patient feels an irresistible inclination to scratch the part. It is slow in its progress and suppuration is rare and tardy. A sweet taste is felt in the mouth and the throat and the palate seem as if smeared with a sort of sticky mucous. 18-20.

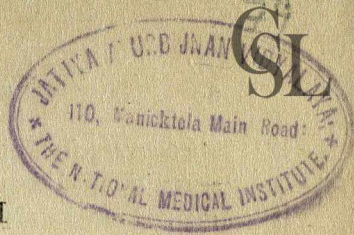
Symptoms of the Medaja Type:—

The swelling is glossy, soft (heavy—D.R) and pale-coloured. It emits a fetid smell and is characterised by excessive itching and an absence of pain. It is short at its root and hangs down from the neck in the shape of a pumpkin (Alávu), gradually gaining its full rotundity at the top. The size of the goitre is proportionate to the growth or loss of flesh of the body. The face of the patient looks as if it has been anointed with oil and a peculiar rumbling sound is constantly heard in the throat. 21.

Prognosis:—A case of goitre attended with difficult respiration, a softening of the whole body, weakness, a nonrelish for food, loss of voice as well as the one which is more than of a year's standing should be abandoned by the physician as incurable. 22.

Metrical Text:—A pendent swelling whether large or small and occurring about the region of the throat and resembling the scrotum in shape is called a Gala-Ganda. 23.

Thus ends the eleventh Chapter of the Nidána Sthánam in the Susrutá Samhitá which treats of the Nidánam of Granthi, Scrofula, etc.



CHAPTER XII

Now we shall discourse on the Nidānam of **Vridhhi** (hydrocele, hernia, scrotal tumours etc), **Upadanśa** (disease of the genital organ), and **Ślipada** (elephantiasis). 1.

Classes :—There are seven different types of **Vridhhi** such as the Vātaja, Pittaja, Kaphaja, Raktaja, Medaja, Mutraja and the Antra-vridhhi. Of these both the Mutraja-vridhhi (hydrocele or extravagation of the urine), and Antra-vridhhi types, though owing their origin to the deranged condition of the bodily Vāyu, have been so named after the organic matters or anatomical parts (urine, iliac colon etc.) involved in them. 2.

Definition and Premonitory symptoms :—Any of the deranged Doshas (Vāyu, Pittam, etc) lying in the nether regions of the body may resort to the spermatic cords (Dhamani) and give rise to a swelling and inflammation of Phalacosha (scrotal sac) which is called **Vridhhi** (scrotal tumour etc.). A pain in the bladder, scrotum, penis and the waist (Kati) incarceration of the Vāyu and the swelling of the scrotum, are the premonitory symptoms of the disease. 3—4.

The Dosha-originated Types :—The type in which the scrotum becomes distended with Vāyu like an inflated air-drum, marked by roughness of (its surface) and the presence of a varied sort of Vātaja pain (in its interior) without any apparent cause is called **Vataja Vridhhi**. The swollen scrotum, of the **Pittaja Vridhhi**, assumes the colour of a ripe



Audumvara fruit and is attended with fever, a burning sensation and heat in the affected part. It is of a marked rapid growth and speedy suppuration (of the scrotum). The swollen organ in the **Kaphaja Vridhhi** becomes hard and cold to the touch accompanied by little pain, and itching (in the affected part). In the **Raktaja** type the swollen scrotum is covered over with black vesicles, all other symptoms of the type being identical with those of the **Pittaja** one. In the **Medaja** type the swollen scrotum looks like a ripe *Tala* fruit and becomes soft, glossy and slightly painful. The patient feels a constant inclination to scratch the part. The **Mutrāja-vridhhi** (hydrocele) owes its origin to a habit of voluntary retention of urine, its characteristic symptoms being softness and fluctuation on the surface of the swollen scrotum like a skin-bladder filled with water, painful urination, pain in the testes and swelling of the scrotum. 5.

Antra-vridhhi (Inguinal hernia):—The local *Vāyu* enraged and unusually aggravated by lifting a great load, wrestling with a stronger person, violent physical strain or a fall from a tree and such like physical labour doubles up a part of the small intestine and presses it down into the inguinal regions lying there strangulated in the form of a knot (*Granthi*) which is known as **Antra-vridhhi** (inguinal hernia). The part not properly attended to at the outset descends into the scrotum which becomes ultimately elongated and intensely swollen and looks like an inflated air-bladder. It (hernia) ascends upwards under pressure, making a peculiar sound, (gurgling); while let free it comes down and again gives rise to the swelling of the scrotum. This disease is called **Antra-vridhhi** and is incurable. 6.



The Upadanśam:—An inflammatory swelling of the genital, whether ulcerated or not is called **Upadanśa***. The disease owes its origin to the action of the local Doshas, aggravated by promiscuous and excessive sexual intercourse, or by entire abstinence in sexual matter; or by visiting a woman, who had observed a vow of lifelong continence or one who has not long known a man, or one in her menses or one with an extremely narrow or spacious vulva, or with rough or harsh or large pubic hairs; or by going unto a woman whose parturient canal is studded with hairs along its entire length; or by visiting a woman not amorously disposed towards the visitor and vice versa; or by knowing a woman who washes her private parts with foul water or neglects the cleanliness of those parts, or suffers from any of the vaginal diseases, or one whose vagina is naturally foul; or by going unto a woman in any of the natural fissures of her body other than the organ of copulation (Vi-yoni); or by pricking the genital with finger nails, or biting it with the teeth, or through poisonous contact, or through practice of getting the (penis abnormally elongated by pricking the) bristles of a water parasite (*Sūka*) into its body; or by practising

* Upadanśa is not syphilis whole to whole. Certain types of Upadanśa such as the Raktaja and Sānnipātika types which entail the destruction of the organs concerned exhibit certain symptoms which are common to syphilis as well. The secondary eruptions and tertiary symptoms of syphilis are not mentioned by the A'yurvedic Rishis who used to treat it only with vegetable medicines and this fact intimates the probability that the secondary and tertiary symptoms of syphilis might not arise by their efficient and able treatment from the very beginning, preventing the absorption of the poison into the system. The practice of ablution, so common among the Hindus, might be taken into consideration as one of the important preventive factors. Maharshi Charaka has comprised it within the chapter on 'Senile Impotency'. —Ed.



masturbation, or any unnatural offence with female quadrupeds; or by washing the genitals with filthy or poisonous water; or through neglect to wash the parts after coition, or voluntary suppression of a natural flow of semen or urine or through any hurt or pressure on the organ etc. The inflammation of the genital thus engendered is called *Upadansā*. The disease admits of being divided into five distinct types, such as, the *Vātaja*, *Pittaja*, *Kaphaja*, *Tridoshaja* and the *Raktaja*. 7—8.

The symptoms of different Types:—

The roughness of the genitals, the bursting or cracking of the integuments of the penis and prepuce etc., numbness and swelling of the affected part which is perceived rough to the touch and the presence of a varied sort of pain peculiar to the deranged *Vāyu* are the characteristic indications of the *Vātaja* type. In the *Pittaja* type fever sets in (from the very beginning), the penis becomes swollen and assumes the colour of a ripe Indian fig (reddish-yellow), attended with a sort of intolerable burning sensation. The process of suppuration is rapid and a variety of pain peculiar to the deranged *Pittam*, (distinguishes it from the other forms of the disease). The penis becomes swollen, hard and glossy in the *Kaphaja* type marked by itching and a variety of pain characteristic of the deranged *Kapham*. In the blood-originated type (*Raktaja*) the organ bleeds heavily and is covered with the eruptions of large black vesicles. Fever, thirst, (*Sosha*), burning sensations and other characteristic symptoms of the deranged *Pittam* are also present. Palliation is all that can be occasionally effected in these cases. Symptoms specifically betraying to each of the *Vātaja*, *Pittaja* and *Kaphaja* types concurrently manifest themselves in the *Sānnipātika* type of Upa-



danśa. The organ cracks, the ulcers or cancers become infested with parasites and death comes in to put a stop to the suffering of its wretched victim. 9-13.

Ślipadam (Elephantiasis):—The disease in which the deranged Vāyu, Pittam and Kapham, taking a downward course, are lodged in the thighs, knee-joints, legs and the inguinal regions and spread to the feet in course of time and gradually give rise to a swelling therein, is called Ślipadam. There are three types of Ślipada severally due to the actions of the deranged Vāyu, Pittam and Kapham. 14-15.

The symptoms of the different Types:—The swollen parts assume a black colour in the Vataja type and are felt rough and uneven to the touch. A sort of spasmodic pain without any apparent reason is felt (at intervals in the seat of the disease), which largely begins to crack or burst. The Pittaja type is characterised by a little softness and yellowish hue (of the diseased localities) and often attended with fever, and a burning sensation. In the Kaphaja type the affected localities become white, glossy, slightly painful, heavy, contain large nodules (Granthi) and are studded over with crops of papillæ. 16.

Prognosis:—A case of elephantiasis of a year's growth as well as the one which is characterised by excessive swelling (of the affected parts), exudation and vegetation of knotty excrescences resembling the summits of an ant-hill should be given up as incurable. 17.

Memorable Verses:—A preponderance of the deranged Kapham marks the three types of the disease, in as much as, the heaviness and largeness (of the swelling) can not be brought about by any other factor than Kapham. The disease is peculiar to countries



in which large quantities of old rain-water remain stagnant during the greater part (lit.— all seasons) of the year making them damp and humid in all seasons. 18-91

The disease is usually found to be confined to the legs and hands of men but cases are on record in which it has extended to the ear, nose, lips and the regions of the eyes. (Penis—Mádhava-Nidánam). 20.

Thus ends the twelfth Chapter of the Nidánasthánam in the Sushruta Samhitá which treats of the Nidánam of scrotal tumours, hernia, Upadans'am and elephantiasis.





CHAPTER XIII.

Now we shall discourse on the Nidánam of **Kshudrarogam** (diseases which are known by the general name of minor ailments). 1.

These diseases are generally divided into forty-four distinct varieties or types such as :—Ajagalliká, Yavaprakshyá, Andhálaji, Vivritá, Kachchapiká, Valmika, Indravriddhá, Panasiká, Páshána-garddabha, Jála-garddabha, Kakshá, Vishphota, Agni-rohini, Chippam, Kunakha, Anusáye, Vidáriká, Sarkará-Arbudam, Pámá, Vicharchiká, Rakasá, Pádadáriká, Kadara, Alasa, Indralupta, Dárunaka, Arunshiká, Palitam, Maśuriká, Yauvana-pidaká, Padmini-kantaka, Yatumani, Maśaka, Charmakíla, Tilakálaka, Nyachchya, Vyanga, Parivartiká, Avapátiká, Niruddha-prakása, Niruddha-guda, Ahiputanam, Vrishana-kachchu, and Guda-bhransá. * 2.

Metrical Texts :—The species of pimples or eruptions which are shaped like the *Mudga* pulse and are glossy, knotty and painless is called **Ajagalliká**. They are of the same colour (as the surrounding skin) and their origin is usually ascribed to the action of the deranged Kapham and Váyu. The disease is peculiar to infants.† **Yávaprakshyá**:—The eruptions

* Brahmadeva comprising *Garḍḍavika*, *Irvelika*, *Gandhapidika* and *Tilakḍlaka* in the list reads it as consisting of thirty-four different species. Jejjata does not hold the four forms of disease commencing with *Garḍḍavika*, etc. as included within the list. Gayádása, finding them included in all the recensions reads *Garḍḍabhiká*, etc. as included within the list of *Kshudra Roga*, and Pámá etc. as included within the list of *Kshudra Kushtham*.

† They afflict certain infants—Dallana.



which are shaped like the barley-corns, extremely hard, thick at the middle, knotty and affect (lit.—confined to) the flesh are called Yavaprakshyá. They are due to the action of the deranged Váyu and Kapham. **Andhálaji**:—The dense, raised, slender-topped eruptions which appear in circular patches and exude a slight pus are called Andhálaji. They are due to the action of the deranged Váyu and Kapham. **Vivrita**:—Pustules or eruptions, which are coloured like a ripe fig fruit and are flat-topped and appear in circular patches with an intolerable burning sensation, are called Vivrita. They are due to the action of the deranged Pittam. 3—6.

Kachchapiká:—A group of five or six hard, elevated, nodular eruptions (Granthis), arranged in the shape of a tortoise (which may appear on the surface of any part of the body), are called Kachchapiká. They are due to the action of the deranged Kapham and Váyu. **Valmika**:—The knotty undurated eruptions (Granthis) which gradually appear on the soles, palms, joints, neck and on the regions above clavicles and resemble an ant-hill in shape, slowly gaining in size are called Valmika. Ulcers attended with pricking pain, burning, itching sensations and exuding mucopurulent discharges appear around the aforesaid eruptions (Granthis). The disease is due to the action of the deranged Kapham, Pittam and Váyu. 7—8.

Indravriddhá:—Pimples or eruptions (Pidaká) arising (on the surface of the body), arranged in the same circular array as marks the distribution of the seed (sacks) in a lotus flower are called Indravriddhá by the physicians. The disease is caused by the action of the deranged Váyu and Pittam. **Panasika**:—Eruptions (Pidaká) of a sort of extremely painful pustules all over the back or the ears which resemble the

Kumuda bulb in shape, are called **Panasikā**. They are due to the action of the deranged Kapham and Vāyu. **Pāshāna-Garddabha** :—A slightly painful and non-shifting hard swelling, which appears on the joint of the jawbones, (Hanu-sandhi) is called Pāshāna-Garddabha. The disease is the effect of the deranged Kapham and Vāyu. **Jāla-Garddabha** :—A thin and superficial swelling, which like erysipelas is of a shifting or progressive character and is further attended with fever and a burning sensation and which is but rarely found to suppurate, is called Jāla-Garddabha.* The disease results from the deranged Pittam. **Kakshā** :—The disease characterised by the eruptions of black and painful vesicles (Shphota) on the back, sides, and on the region about the arm-pits, is called Kakshā. The disease is likewise attributed to the action of the aggravated Pittam. **Vishphotaka** :—The disease in which eruptions of burnlike vesicles (Shphota) crop up on the whole surface of the body, or on that of any particular locality, attended with fever, is called Vishphotaka. The disease is the effect of vitiated blood and Pittam. 9—14.

Agni-Rohini† :—Vesicles (Shphota) having the appearance of burns and cropping up about the waist

* The circular raised spots studded with vesicles are called Garddabhā. They are reddish and painful and produced by the action of Vāyu and Pittam. Gayāḍasa reads it so.

† Dallana quotes from another Tantram that the morbid principles in men, aggravated through the action of the enraged and augmented Pittam and blood, give rise to vesicles (blisters) like red-hot charcoal by breaking open the flesh at the waist, attended with extreme pain, high fever and an insufferable burning sensation which, if not properly remedied, bring on death within a fortnight, or ten days of their first appearance. These (vesicles) are called *Vahni-Rohini*. And again from another work he cites that a case of *Vahni-Rohini* due to the action of the deranged



(Kakshá) by bursting the local flesh, and which is attended with fever and a sensation as if a blazing fire is burning in the inside (of the affected part), are called Agni-Rohini. The disease is caused by the concerted action of the three deranged Doshas (Váyu, Pittam and Kapham). It is incurable and ends in the death of the patient either on the seventh*, tenth or fifteenth day (of its first appearance). 15.

Chippam :—The deranged Váyu and Pittam vitiating the flesh of the finger-nails, give rise to a disease which is characterised by pain, burning and suppuration. The disease called Chippam, is also denominated *Upanakha* and *Kshataroga*. **Kuna-**

kham :—The nails of fingers becoming rough, dry, black, and injured through the action of the Doshas enraged through the effect of a blow, are called Kunakha (bad nails). It is also called *Kulinam*. **Anusayi** :—

A small swelling (on the surface of the body) which is of the same colour (as the surrounding skin), but is deep-seated, and suppurates in its deeper strata, is called *Anusayi* by the physicians. The disease is the effect of the deranged Kapham. **Vidáriká** :—A round reddish swelling rising either on the auxiliary or inguinal regions in the shape of a gourd (*Vidárikanda*) is known as Vidáriká. The disease is due to the concerted action of the deranged Váyu, Pittam and Kapham and is characterised by symptoms peculiar to each of them. 16–19,

Kapham proves fatal within a fortnight, that due to the deranged Pittam, within ten days, and that due to the deranged Váyu, within a week.

* The patient dies on the seventh day in a case of disease marked by the dominant Váyu, on the tenth day in a case marked by the dominant Pittam and on the fifteenth day in a case of dominant deranged Kapham.

Sarkarārbudam :—The deranged Vāyu and Kapham having recourse to and affecting the flesh, veins (Śirā), ligaments (Snāyu) and fat give rise to a sort of cyst (Granthi) which when it bursts exudes a copious secretion in its nature somewhat like honey, clarified butter or Vasā. The aforesaid Vāyu, when aggravated through excessive secretion, dries and gathers the flesh up again in the shape of (a large number of) gravel-like concretions (Śarkarā) known accordingly as Śarkarārbudam. A fetid secretion of varied colour is secreted from the veins (Śirā) in these Granthis which are sometimes found to bleed suddenly. The three varieties of the skin disease called **Pāmā** (Eczema), **Vicharchikā** (Psoriasis) and **Rakasā** have already been discussed under the head of Kushtham (Chapter. V.). 20—21.

Pādadārikā :—The soles and feet of a person of extremely pedestrian habits become dry (and lose their natural serous moisture). The local Vāyu thus aggravated gives rise to peculiar painful cracks (Dāri in the affected parts) which are called Pādadārikā. **Kadara** :—The knotty (Granthi), a painful, hard growth raised at the middle or sunk at the sides, which exudes a secretion and resembles an Indian plum (Kola—in shape), and appearing at the soles (palms according to—Bhoja) of a person as an outcome of the vitiated condition of the local blood and fat produced by the deranged Doshas incidental to the, pricking of a thorn etc. or of gravel is called a Kadara (corns). **Alasa** :—An affection, caused by contact of poisonous mire and appearing between the toes, which is characterised by pains, burning, itching and exudation, is called Alasa. 22—25.

Indralupta :—The deranged Vāyu and Pittam having recourse to the roots of the hairs bring about their



gradual falling off, while the deranged blood and Kapham of the locality fill up those pores or holes, thus barring their fresh growth and recrudescence. The disease is called **Indralupta**,* **Rujya** or **Khálitya** (Alopecia). **Dárunaka**:—The disease in which the hairy parts of the body (roots of hairs) become hard, dry and characterised by an itching sensation is called **Dárunaka**. The disease is due to the action of the deranged Kapham and Váyu. **Arunshiká**:—Ulcers (Arunshi) attended with mucopurulent discharges and furnished with a number of mouths or outlets and appearing on the scalps of men as the result of the action of local parasites and of the deranged blood and Kapham (of the locality) are called **Arunshiká**. **Palitam**:—The heat and Pittam of the body having recourse to the region of the head owing to overwork, fatigue, and excessive grief or anger, tend to make the hair prematurely grey, and such silvering of the hair (before the natural period of senile decay) is called **Palitam**. **Masuriká** (variola):—The yellow or copper-coloured pustules or eruptions attended with pain, fever and burning and appearing all over the body, on (the skin of) the face and inside the cavity of the mouth, are called **Masuriká**. **Yauvana-pidaká**—(**Mukhadushiká**):—The pimples like the thorns of a *Sálmali* tree, which are found on the face of young men through the deranged condition of the blood, Váyu and Kapham, are called **Yauvana-pidaká** or pimples of youth. **Padmini-Kantaka**:—The circular, greyish patches or rash-like eruptions

* Women are generally proof against this disease owing to their delicate constitution and to their being subjected to the monthly discharge of vitiated blood and at the same time to their undergoing no physical exercise, and hence there is little chance of the bodily Pittam being deranged and bringing on this disease.



studded over with thorny papilla of the skin resembling the thorns on the stem of the lotus marked by itching are called Padmini-kantaka. The disease is due to the deranged condition of the Vāyu and Kapham. **Yatumanī (mole)** :—The reddish, glossy, circular, and painless, congenital marks (Sahajam) or moles on the body not more elevated (than the surrounding skin) are called Yatumanī. The disease is due to the deranged condition of the blood and Pittam. 26—33.

Maśaka (Lichen) :—The hard, painless, black and elevated eruptions on the body (skin) resembling the Māsha pulse in shape, caused by the aggravated condition of the bodily Vāyu are called Maśaka. **Tilakālaka** :—The black painless spots on the skin about the size of a sesamum seed and level with the skin are called Tilakālaka. This disease is caused through the aggravated condition of the Vāyu, Pittam and Kapham.† **Nyachcham** :—The congenital, painless, circular, white or brown (Śyāva) patches on the skin, which are found to be restricted to a small or comparatively diffused area of the skin, are called Nyachcham. **Charmakila** (hypertrophy of the skin) :—The causes and symptoms of the disease known as Charmakila have been already described (under the head of the Arśa-Nidānam). **Vyanga** :—The Vāyu being aggravated through wrath and over-fatiguing physical exercise, and surcharged with Pittam, and suddenly appearing on the face of a person, causes thin, circular, painless and brown-coloured patches or stains. They are known by the name of Vyanga.* 34-38.

* According to certain authorities it is due to the absorption of blood by Vāyu and Pittam.

† According to others the spot goes by the name of *Nilikam*, if it is black-coloured and appears anywhere other than on the face.



The Parivartiká :—The vital Váyu (Vyána) aggravated by such causes as excessive massage (masturbation), pressure, or local trauma, attacks the integuments of the penis (prepuce) which being thus affected by the deranged Váyu forms into a knot-like structure and hangs down from the glans penis. The disease known as Parivartiká or Phymosis is due to the action of the deranged Váyu aggravated by any extraneous factor. It is marked by pain and burning sensation; and sometimes suppurates. When the knotty growth becomes hard and is accompanied by itching, then it is caused by the aggravated Kapham. 39.

Avapátiká :—When the integuments of the prepuce is abnormally and forcibly turned back by such causes as coition under excitement, with a girl (before menstruation and before the rupture of the hymen and consequently with a narrow external orifice of the vagina) or masturbation or pressure or a blow on the penis, or a voluntary retention of a flow of semen or forcible opening of the prepuce, the disease is called Avapátiká or paraphymosis. **Niruddha-prakása :**—The prepuce affected by the deranged Váyu entirely covers up the glans penis and thus obstructs and covers up the orifice of the urethra. In cases of partial obstruction a thin jet of urine is emitted with a slight pain. In cases of complete closing the emission of urine is stopped without causing any crack or fissure in the glans penis in consequence. The disease is called Niruddha-prakása which is due to the deranged Váyu and is marked by pain (in the glans penis). 39-41.

Niruddhaguda :—The Váyu (Apána) obstructed by the repression of a natural urging towards defecation stuffs the rectum, thus producing constriction of its passage and consequent difficulty of defeca-



tion. This dreadful disease is known as Niruddha-gudam (stricture of the rectum) which is extremely difficult to cure. **Ahiputana** :—A sort of itch-like eruptions appearing about the anus of a child owing to a deposit of urine, perspiration, feces etc consequent on the neglect in cleansing that part. The eruptions which are the effects of the deranged blood and Kapham soon assume an Eczematous character and exude a purulent discharge on account of constant scratching. The Eczema (Vrana) soon spreads, and coalesces and proves very obstinate in the end. The disease is called Ahiputana. **Vrishana-kachchu** :—When the filthy matter, deposited in the scrotal integuments of a person who is negligent in washing the parts or in the habit of taking daily ablutions, is moistened by the local perspiration, it gives rise to an itching sensation in the skin of the scrotum, which is speedily turned into running Eczema by constant scratching of the parts. The disease is called Vrishana-kachchu and is due to the aggravated condition of the Kapham and blood. **Guda-Bhransa** :—A prolapse or falling out of the anus (due to the Vāyu) in a weak and lean patient through straining, urging or flow of stool as in dysentery is called Guda-Bhransa or prolapsus ani. 42—45.

Thus ends the thirteenth Chapter of the Nidāna Sthānam in the Sus'ruta Samhitā which treats of the Nidānam of minor ailments.



CHAPTER XIV.

Now we shall discourse on the Nidánam of the disease known as **Śukadosha**. 1.

Any of the eighteen different types of the disease may affect the genital (penis) of a man who foolishly resorts to the practice of getting it abnormally elongated and swollen by plastering it with **Śuka** (a kind of irritating water insect) and not in the usual officinal way.

Classification :—Diseases, which result from such malpractices, are known as,—**Sarshapiká**, **Ashthiliká**, **Grathitam**, **Kumbhiká**, **Alaji**, **Mriditam**, **Sammudhapidaká**, **Avamantha**, **Pushkariká**, **Sparsáháni**, **Uttamá**, **Śatoponaka**, **Tvakapáka**, **Śonitárvudam**, **Mánsárvudam**, **Mánsapáka**, **Vidradhi** and **Tilakálak**. 2.

Metrical Texts :—The tiny herpetic eruptions (**Pidaká**) which resemble the seeds of white mustard in shape and size, (and are found to crop up on the male organ of generation) on account of a deranged condition of the blood and Kapham, as the result of an injudicious application of **Śuka** plasters are called **Sarshapiká** by the wise. Eruptions of hard stone-like pimples, (**Pidaká**) irregular at their sides or edges and which are caused by the aggravation of the local **Váyu** by the use of a plaster of the poisonous **Śuka**, are called **Ashthiliká**. The knotty **Granthis** (nodules) on the penis owing to its being frequently stuffed with the bristles of a **Śuka** insect are called **Grathitam**. This type is caused by the deranged action of the Kapham. A black wart resembling the stone or seed of a jambolin fruit in shape is called **Kumbhiká**. This type is due to the deranged condition of the blood and Pittam. 3—5.

An **Alaji** (incidental to an injudicious application of Śuka on the penis) exhibits symptoms, which are identical with those manifested by a case of Alaji in Prameha (Ch. vi). A wart (papilloma) attended with swelling of the part and caused by the aggravated Vāyu on the hard and inflamed penis causing pressure (on the urethra) is called **Mriditam**. The pustule or eruption appearing on the penis on account of its being extremely pressed by the hand (for the insertion of the hairs of the Śuka) in its dorsum is called **Sammudha-pidaka**. (It is the outcome of the aggravated Vāyu*). A large number of elongated pustules on the penis (incidental to an application of Śuka to the part) which burst at the middle, causing pain and shivering, is called **Avamantha** (epithelioma). 6—10.

The **Pushkarikā** type of the disease is marked by the eruptions of small pimples around the principal one. The type has its origin in the deranged condition of the blood and Pittam, and is so called from the part of the excrescences being arranged in rings or circles like the petals of a lotus flower in shape. A complete anesthesia (of the affected organ) owing to the vitiated blood by the injudicious application of a Śuka is called **Sparsā-hāni**. Pustules appearing on the penis through the vitiation of the local blood and Pittam by such constant applications are called **Uttamā**. A suppuration of the prepuce under the circumstance is called **Tvakapākh**. There is fever with a burning sensation in the affected organ. The disease is due to the vitiated condition of the blood and Pittam. 11—15.

The type of the disease in which the penis is marked by the eruption of black vesicles and is covered over with a large number of red pimples or pustules with

* According to Dallana it is due to the action of Vāyu and blood.



an excruciating pain in the ulcerated region of the organ is called **Śonitārvudam**. The vegetation of a fleshy tumour on the penis (incidental to a blow on the organ to alleviate the pain of inserting the hairs of the Śuka insect into its body), is called **Mānsārvudam**. A supuration as well as sloughing of the penis attended with different kinds of pain which severally mark the deranged Vāyu, Pittam and Kapham is called **Mānsapāka**. This type is caused by the concerted action of the deranged Vāyu, Pittam and Kapham. 15-18.

The specific symptoms of a Tridoshaja Vidradhi as described before (Chap. ix.) mark the one which affects the penis (owing to an injudicious application of the highly poisonous irritant Śuka to the organs) The disease is called **Vidradhi**. A process of general supuration and sloughing of the organ marks the type which is produced by the application of a black Śuka or one of a variegated coloured insect of the same species. The type is called **Tilakālaka**, and should be regarded as Tridoshaja one. 19-21.

Prognosis :—Of the above enumerated malignant diseases of the penis, those known as Mānsārvuda, Mānsapāka, Vidradhi and Tilakālaka shoulda be deemed as incurable. 22.

Thus ends the fourteenth Chapter of the Nidāna Sthānam in the Sushruta Samhitā which treats of Nidānam of different types of S'ukadohsa.



CHAPTER XV.

Now we shall discourse on the Nidānam of **Bhagnam** (fractures and dislocations etc. of bones). 1

Various kinds of fracture may be caused from a variety of causes, such as by a fall, pressure, blow, violent jerking or by the bites of ferocious beasts etc. These cases may be grouped under the two main subdivisions such as **Sandhi-Muktam** (dislocation) and **Kānda-Bhagnam** (fracture of a kānda). 2.

Cases of Sandhi-muktam (dislocation) may be divided into six different types, such as the *Utplishtam*, *Vislishtam*, *Vivartitam*, *Adhak-Kshiptam*, *Ati-kshiptam* and *Tiryak-kshiptam*. 3.

General features of a dislocation :—

Incapability of extension, flexion, movement, circumduction and rotation (immobility, considered in respect of the natural movements of the joint), of the dislocated limb, which becomes extremely painful and cannot bear the least touch. These are said to be the general symptoms of a dislocation. 4.

Diagnostic symptoms of a dislocation :—

In case of a friction of a joint by two articular extremities (**Utplishtam**) a swelling is found to appear on either side of the articulation attended with a variety of pain at night. A little swelling accompanied by a constant pain and disordered function of the dislocated joint, marks the case of simple-looseness (**Vislishtam**) of the articulation; while pain and unevenness of the joint owing to the displacement of the connected bones distinguish a case of **Vivartitam** (lateral displacement). An excruciating pain, and looseness of the dislocated



bone are the symptoms which characterise a case in which a dislodged bone is seen to drop or hang down from its joint (**Adhah-kshiptam**). In a case of abnormal projection (**Ati-kshiptam**), the dislocated bone is removed away from its joint which becomes extremely painful. A case of oblique dislocation (**Tiryak-kshiptam**) is marked by the projection or displacement of the bone on one side accompanied by a sort of intolerable pain. 5.

Different kinds of Kānda Bhagnam :—Now we shall describe the Kānda-Bhagnam (fracture etc.). Fractures may be divided into twelve different kinds which are known as, Karkatakam, Aśvakarnam, Churnitam, Pichchitam, Asthi-chchalitam, Kānda-bhagnam, Majjāgatam, Atipātitam, Vakram, Chchinnam, Pātitam and Sphutitam. 6.

General symptoms of Kānda-bhagnam :—A violent swelling (about the seat of fracture) with throbbings or pulsations, abnormality in the position (of the fractured limb), which cannot bear the least touch, crepitus under pressure, a looseness or dropping of the limb, the presence of a variety of pain and a sense of discomfort in all positions are the indications which generally mark all kinds of fracture (Kānda-bhagnam). 7.

Diagnostic symptoms :—The case where a fractured bone, pressed or bent down at its two articular extremities, bulges out at the middle so as to resemble the shape of a knot (Granthi), is called **Karkatam**. The case where the fractured bone projects upward like the ear of a horse is called **Aśvakarnam**. The fractured bone is found to be shattered into fragments in a case of the **Churnitam** or comminuted kind which can be detected both by palpation and crepitation. A smashed condition of the fractured bone marks a



case of the **Picchitam** kind which is often found to be marked by a great swelling. The case where the covering or skin of the bone (periosteum) is cast or splintered off is called the **Asthi-chohallitam**. The case where the completely broken or severed bones are found to project through the local skin, is called **Kānda-bhagnam** (compound). The case where a fragment of the fractured or broken bone is found to pierce into the bone and dig out the marrow, is called **Majjānugatam**, (Impacted fracture). The case where the fractured bone droops or hangs down is called **Ati-pātitam**. The case where the unloosened bone (from its position) is bent down in the form of an arch is called **Vakram**. The case where only one articular extremity of the bone is severed is called **Chhinnam**. The case where the bone is slightly fractured and pierced with a large number of holes, is called **Pātitam**, an excruciating pain being the leading indication. The case where the bone largely cracked and swollen becomes painful as if stuffed with the bristles of a Śuka insect is called **Sphutitam** (Greenstick fracture). Of the several kinds of fracture, cures are effected with extreme difficulty in a case of the Churnitam, Chhinnam, Ati-pātitam or Majjānugatam kind. A case of displacement or laxation occurring in a child or in an old or weak patient or in one suffering from asthma (Śvasa) or from any cutaneous affection (Kushtha) or Kshata-Kshina disease is difficult to cure. 8.

Memorable verses:—The following cases are to be given up as hopeless—*vis.* fracture of the pelvic bone (or of bones that are of this description, wherever they may be situated); dislocation of the pelvic joints; compound fracture of the thigh bone or of the flat bones); fracture into small pieces of the



frontal bone or its dislocation; simple fracture of the breast-bones, back-bone and temporal and cranial bones. If the dislocations and fractures be improperly set from the outset (*Adito*)* or if the union be anyhow disturbed there is no hope for recovery. 9—11.

If fractures happen at any time of the first three stages of **adult life** which has been described before (*vide* *Sutrasthāna* Chap. XXXV.) and if they are set up by an able surgeon they have a great chance of being united. 12.

A bending of a gristle or cartilage (**Taruna**) is called its fracture. A **Nalaka** (long bone) bone is usually found to be severed. A **Kapāla** bone is found to be cracked, while a **Ruchaka**† (tooth) is found to be splintered off. 13.

* The word *Adito* may be taken into the sense of congenital malformation which is beyond remedy.

† The presence of the particle 'cha' denotes **Valya-asthi**.

Thus ends the fifteenth Chapter of the *Nidāna Sthānam* in the *Sus'ruta samhita* which treats of the *Nidānam* of dislocations and fractures.



CHAPTER XVI.

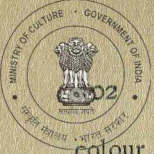
Now we shall discourse on the Nidánam of **Mukharogam** (diseases which affect the cavity of the mouth in general). 1.

General Classifications:—Sixty five* different forms of mouth disease are known in practice. They are found to attack seven different localities viz. the lips, the gums of the teeth, tongue, palate, throat and the entire cavity ; of these eight are peculiar to the lips ; fifteen, to the roots of the teeth ; eight to the teeth ; five to the tongue ; nine to the palate ; seventeen to the throat ; and three to the entire cavity. 2—3.

Diseases of the lips:—The eight forms which affect the lips, are either Vátaja, Pittaja, Kaphaja, Sánnipátika, Raktaja, Māns'aja, Medaja or Abhigátaja (Traumatic). 4.

The Vátaja Type:—The lips become dry, rough, numbed, black, extremely painful and the affected part seems as if it were smashed and pulled out or cracked by the action of the aggravated **Váyu**. In the **Pittaja type**—the lips become blue or yellow-coloured and studded with (a large number of small) mustard-seed-like eruptions, which suppurate and exude a purulent discharge attended with a burning sensation (in the locality). In the **Kaphaja type**—the affected lips are covered with small eruptions, which are of the same colour as the surrounding part, and become slimy, heavy or thick, cold and swollen. Pain is absent in this type and the patient feels an irresistible inclination to scratch the parts. In the **Sánnipátaja type**, the lips change

* According to others sixty-seven—but Dallan does not support this.



colour, becoming black, yellow, or ash-coloured (white) at intervals and are found to be studded with various sorts of eruptions. 5—8.

The Raktaja type :—(Produced by the vitiated condition of the blood) the affected lips look as red as blood and profusely bleed and crops of date coloured (chocolate-coloured) eruptions appear on their surface. In the **Mānsaja type** (due to the vitiated condition of the local flesh), the lips become heavy, thick and gathered up in the form of a lump of flesh. The angles of the mouth become infested with parasites which germinate and spread themselves in the affected parts. In the **Medaja** (fat-originated) **type** the lips become numbed, soft, heavy and marked by an itching sensation. The skin of the inflamed surface becomes glossy and looks like the surface layer of clarified butter exuding a thin crystal-like (transparent) watery discharge. In the **Abhighātaja** (Traumatic) **type**, the lips become red, knotty and marked by an itching sensation and seem as if pierced into or cut open with an axe and (become cracked and fissured). 9—12.

Disease of the roots of the teeth :—

Diseases which are peculiar to the roots of the teeth, are known as *Śitāda*, *Danta-pupputaka*, *Danta-veshtaka*, *Saushira*, *Māha-Saushira*, *Paridara*, *Upakuśa*, *Danta-vaidarbha*, *Vardhana*, *Adhimānsa* and the five sorts of *Nādi* (sinus). 13.

Śitāda (Scurvy);—The gums of the teeth suddenly bleed and become putrified, black, slimy and emit a fetid smell. They become soft and gradually slough off. The disease has its origin in the deranged condition of the local blood and *Kapham*. **Danta-pupputaka** (gum boil):—The disease in which the roots of two or three teeth at a time is marked by a violent swelling and

pain is called Danta-pupputaka. The disease is due to the vitiated condition of the blood and Kapham.

Danta-veshtaka:—The teeth become loose in the gums, which exude a discharge of blood and pus. This disease is due to the vitiated blood of the locality. **Śaushira:**—

The disease in which an itching painful swelling appears about the gums attended with copious flow of saliva is called Śaushira (Alveolar abscess). It is caused by the deranged blood and Kapham of the locality. **Mahā-**

Śaushira:—The disease in which the teeth become loose, the palate marked by sinuses or fissures, the gums putrified, and the whole cavity of the mouth inflamed, is called Mahāśaushira, the outcome of the concerted action of the deranged Doshas of the body. 14—18.

Paridara:—The disease in which the gums become putrified, wear off and bleed is called Paridara (bleeding gums). The disease has its origin in the deranged condition of the blood, Kapham and Pittam.

Upakūśa:—The disease in which the gums become marked by a burning sensation and suppuration and the teeth become loose and shaky (in their gums) in consequence and bleed at the least shaking, is called Upakūśa. There is a slight pain, and the entire cavity of the mouth becomes swollen and emits a fetid smell; this disease is due to the vitiated condition of the blood and Pittam. 19.

Danta-Vaidarbha:—The disease which is consequent upon the friction of the gums marked by the appearance of a violent swelling about the portion (so rubbed and in which) the teeth become loose and can be moved about, is called Danta-vaidarbha which is due to an extraneous cause such as a blow etc. **Vardhana:**—the disease which is marked by the advent of an additional tooth (the last molar) through the action

of the deranged Vāyu with a specific excruciating pain of its-own, is called Vardhana or eruption of the Wisdom tooth. The pain subsides with the cutting of the tooth. **Adhimānsa** :—The disease in which a violent and extremely painful tumour appears about the root of the tooth, and is situated in the farthest end of the cavity of the cheek-bone accompanied by a copious flow of saliva is called Adhimānsa or Epulis. It is due to the deranged Kapham. The five sorts of Nādi (sinus) which affect the roots of the teeth (are either Vātaja, Pittaja, Kaphaja, Sānnipātaja or Abhigṛhātaja), their symptoms being respectively identical with those of the types of Nādi-vrana. 20 - 24.

Diseases to the teeth proper :—Diseases which are restricted to the teeth proper are named as, Dālana, Krimi-dantaka, Danta-harsha, Bhanjaka, Śarkarā, Kapālika, Śyāva-dantaka and Hanu-moksha. 25.

Dālana :—The disease in which the teeth seem as if being cleft asunder with a violent pain is called Dālana or toothache, the origin of which is ascribed to the action of the aggravated state of the bodily Vāyu.

Krimi-dantaka :—The disease in which the teeth are eaten into by worms, is called Krimi-dantaka (caries). The teeth become loose and perforated by black holes accompanied by a copious flow of saliva. The appearance of an extremely diffused swelling (about the roots of decayed teeth) with a sudden aggravation of the accompanying pain without any apparent cause is also one of its specific features. **Danta-harsha** :—The disease in which the teeth cannot bear the heat, cold or touch is called Danta-harsha. It is due to the deranged condition of Vāyu. **Bhanjaka** :—The disease in which the face is distorted, the teeth break, and the accompanying pain is severe, is called Bhanjaka (degeneration of the

teeth). The disease is due to the deranged condition of the Váyu and Kapham. **Śarkarā** :—The disease, in which sordes, formed on the teeth and hardened (by the action of the deranged Váyu), lie in a crystallised form at the roots of the teeth, is called Śarkarā (Tartar). Such deposits tend to destroy the healthy growth and functions of the teeth. **Kapalikā** :—The disease in which the preceding crystallised deposits get cemented together and afterwards separate from the teeth taking away a part of their coating (enamel) is called Kapalikā (calcareous deposit) which naturally makes an erosion into and destroys the teeth. **Śyāva-dantaka** :—The disease, in which the teeth variously scorched by the action of the deranged Pittam assumes a blackish or blue colour, is named as Śyāva-dantaka (black teeth). **Hanu-moksha** :—The disease in which the Váyu aggravated (by such causes, as by loud talking, chewing of hard substances, or immoderate yawning) produces the dislocation of the jawbones is called Hanu-moksha. It is identical with Arddhitam as regards its symptoms. 26 - 33.

Diseases of the tongue :—The five kinds of diseases which affect the organ of taste are the three sorts of Kantakas due to the three deranged Doshas (Vátaja Pittaja and Kaphaja), Alása and Upa-jihviká. 34

The three Kantaks :—In the **Vátaja Kantaka** type the tongue becomes cracked, loses the sense of taste and becomes rough like a teak leaf (giving the organ a warty appearance). In the **Pittaja Kantaka** form the tongue is coloured yellow and studded over with furred blood-coloured papillæ with the burning sensation (of the Pittam in them). In the **Kaphaja Kantaka** type the tongue becomes heavy, thick and grown over with vegetation of slender fleshy warts in the



shape of *S'almali* thorns. **Alása** :—The severe inflammatory swelling about the under surface of the tongue is called *Alása*, which if allowed to grow on unchecked gives rise to numbness and immobility of the organ and tends to a process of rapid suppuration at its base. The disease is caused by the deranged blood and *Kapham*. The **Upa-jihvā** :—The disease in which a (cystic) swelling shaped like the tip of the tongue appears about the under-surface of that organ by raising it a little is called *Upa-jihvikā* (*Ranula*). The accompanying symptoms are salivation, burning and itching sensations in the affected organ ; these are due to the deranged *Kapham* and blood (of the locality). 35—37.

Disease of the palate :—Diseases which are peculiar to the part of the palate are named *Gala-śundikā*, *Tundikeri*, *Adhrusha*, *Mānsa-kachchapa*, *Arvuda*, *Mānsa-sanghata*, *Tālu-śosha* and *Tālu-pāka*. 38.

Gala-śundikā :—The diffused and elongated swelling, caused by the deranged blood and *Kapham*, which first appears about the root of the palate and goes on extending till it looks like an inflated skin-bladder is called *Gala-śundikā* (tonsilitis) by physicians. Thirst, cough, difficult breathing are the indications of the disease. **Tundikeri** :—A thick swelling resembling the fruit of the *Tundikeri* plant in shape and appearing about the root of the palate attended with a burning, piercing or pricking pain and suppuration is called *Tundikeri* (abscess of the tonsil). **Adhrusha** :—A red, numbed swelling appearing about the same region, as the effect of the vitiated blood of the locality, attended with severe fever and pain, is known by the name of *Adhrusha*. **Mānsa-kachchapa** :—A brownish and slightly painful swelling somewhat shaped like the back of a tortoise (and appearing about the region of the soft



palate) is called *Mánsa-kachchhapa*. The disease is slow in its growth or development and is due to the deranged *Kapham*. **Arvuda**:—A swelling shaped like the petal of the lotus lily and appearing in the region of the soft palate as an outcome of the aggravated condition of the local blood is called *Arvudam*. The swelling is identical with the *Raktárvuda* described before. **Mánsa-Sangháta**:—A vegetation of morbid flesh at the edge or extremity of the soft palate through the action of the deranged *Kapham* is called *Mánsa-Sangháta*. It is painless. **Tálu-pupputa**:—A painless permanent swelling to the shape of the *Kola* fruit (plum) caused by the deranged fat and *Kapham* at the region of the soft palate is called *Tálu-pupputa*. **Tálu-sósha**:—The disease of the soft palate in which the patient feels a sort of parched sensation with dyspnœa and a severe piercing pain in the affected part is called *Tálu-sósha*, which has its origin in the aggravated condition of the bodily *Váyu* acting in concert with the deranged *Pittam*. **Tálu-páka**—The disease in which the deranged *Pittam* sets up a very severe suppurative process in the soft palate is called *Tálu-páka*. 39-47.

The diseases of the throat and larynx:—The diseases peculiar to the throat and the larynx are seventeen in number and are known as the five types of *Rohini*, *Kantha-Śáluka*, *Adhijihva*, *Valaya*, *Valása*, *Eka-vrinda*, *Vrinda*, *Śataghni*, *Giláyu*, *Gala-vidradhi*, *Galaugha*, *Svaraghna*, *Mánsatána*, and *Vidári*. 48.

General features of Rohinis:—The aggravated *Váyu*, *Pittam*, *Kapham*, either severally or in combination, or blood may affect the mucous of the throat and give rise to vegetations of fleshy papillæ,



which gradually obstruct the channel of the throat and bring on death. The disease is called Rohini (Diphtheria). 49.

The Vátaja Rohini:—A vegetation of extremely painful fleshy Ankuras (nodules), crops up all over the tongue which tend to obstruct the passage of the throat and are usually accompanied by other distressing symptoms characteristic of the deranged Váyu. **Pittaja-Rohini:**—The Ankuras (nodules) in the present type are marked by speedy growth and suppuration, and are accompanied by a burning sensation and high fever. **Kaphaja Rohini:**—The Ankuras (nodules) become heavy, hard and characterised by slow suppuration gradually obstructing the passage of the throat. 50-52.

The Sánnipátika Type:—Suppuration takes place in the deeper strata of the membrane accompanied by all the dangerous symptoms peculiar to the three aforesaid types of the disease. It is rarely amenable to treatment. **Raktaja Type:**—Symptoms characteristic of the Pittaja type of the disease are present and the fleshy outgrowth formed in the throat, is found to be covered with small vesicles. This type is incurable.* 53-54

Kantha-Śálukam:—The disease in which a hard rough nodular growth (Granthi) in the shape of a plum-stone crops up in the throat, which seems as if it has been stuffed with the bristle of a *Suka* insect or been pricked by thorns is called Kantha-Śálukam. The disease is due to the action of the deranged Kapham. It is amenable to surgical treatment only. **Adhijihva:**—A small swelling like the tip of the tongue caused by the

* The reading Sádhyā (curable) which is to be met with in the several printed editions of Mádhab's Nidánam in lieu of the reading Asádhyā (incurable) is not to our mind correct.



deranged blood and Kapham over the root of the tongue is called Adhijihva, which should be given up as soon as suppuration sets in. **Valaya** :— A circular or ring-shaped raised swelling obstructing or closing up the upper end of the œsophagus (structure of œsophagus) is called Valaya. It cannot be cured and hence should be given up. It is due to the deranged action of the Kapham in the locality. **Valása** :— The disease in which the unusually aggravated Váyu and Kapham give rise to a swelling in the throat, which is extremely painful and causes a difficulty of respiration, ultimately producing symptoms of complete asphyxia is called Valása by learned physicians and is very difficult to cure. 55—58.

Eka-vrinda and Vrinda* :— The disease in which a circular, raised, heavy and slightly soft swelling appears in the throat attended with itching, a slightly burning sensation and a slight suppuration is called **Eka-vrinda**. The disease is due to the effect of vitiated blood and Kapham. The disease in which a round elevated swelling attended with high fever and a slightly burning sensation is formed in the throat through the aggravated condition of the blood and Pittam is called **Vrinda**. A piercing pain in the swelling points to its Vátaja origin. 59—60.

Śataghni :— The disease in which, through the concerted action of the deranged Váyu, Pittam and Kapham, a hard throat obstructing Varti (jagged membrane) edged like a Śataghni† and densely beset with fleshy excrescences is formed along the inner lining of

* The diseases of the throat are 17 in number. Taking Vrinda as a separate disease they amount to 18; but Vrinda, affecting similar place and being similar in appearance with but a slight distinction of symptoms, is only a particular state of Eka-vrinda, and not a separate disease.

† Śataghni is a kind of weapon used in ancient warfare.



that pipe is denominated as Śataghni. Various kinds of pains, (characteristics of each of the deranged Vāyu, Pittam and Kapham) are present in this type which should be necessarily considered as irremediable. 61.

Gilāyu :—The disease in which the aggravated Kapham and blood give rise to a hard and slightly painful (D. R. extremely painful) glandular swelling in the throat to the size of the stone of the *Āmalaka* fruit is called Gilāyu. A sensation as if a morsel or bolus of food is stuck in the throat is experienced which by its very nature is a surgical case. 62.

Gala-vidradhi :—The disease in which an extensive swelling occurs along the whole inner lining of the throat, owing to the concerted action of the deranged Vāyu, Pittam and Kapham is called Gala-vidradhi which exhibits all the features present in a Vidradhi of the Śanipātika type.

Galaugha :—The disease in which a large swelling occurs in the throat so as to completely obstruct the passage of any solid or liquid food and also that of Udāna-vāyu (choking the pharynx, larynx and the mouth of the esophagus), attended with a high fever is called Galaugha, the origin of which should be ascribed to the action of the deranged blood and Kapham.

Svaraghna :—The disease in which the patient faints owing to the choking of the larynx by the deranged Kapham which is marked by stertorous breathing, hoarseness, dryness and paralysed condition of the throat is called Svaraghna which has its origin in the deranged Vāyu. 63—65.

Mānsatāna :—The disease in which a pendent, spreading and extremely painful swelling appears in the throat which gradually obstructs the pipe is called Mānsatāna. It invariably proves fatal and is caused by the deranged Vāyu, Pittam and Kapham. 66

Vidári :—The disease in which a copper-coloured swelling occurs in the throat, marked by a pricking and burning sensation, and the flesh of the throat gets putrefied and sloughs off (and emits a fetid smell) is called Vidári. The disease is of a Pittaja origin and is found to attack that side of the throat on which the patient is in the habit of lying. 67.

The disease in the entire cavity :—
 Cases which are found to invade the entire cavity of the mouth (without being restricted to any particular part thereof) may be either due to Vátaja, Pittaja, Kaphaja or Raktaja type and are known by the general name—**Savra-Sara.** 68.

In the **Vátaja type** the entire cavity of the mouth is studded with vesicles attended with a pricking sensation in their inside. In the **Pittaja type** a large number of small yellow or red-coloured vesicles attended with a burning sensation crops up on the entire (mucous membrane lining the cavity of the mouth. In the **Kaphaja** variety a similar crop of slightly painful, itching vesicles of the same colour as the skin (is found on the entire inner surface of the mouth.) The blood-originated **Raktaja** type is nothing but a modification of the Pittaja one (giving rise to similar symptoms); it is also by others called **Mukha-pāka.** 69-72.

Thus ends the sixteenth Chapter of the Nidána Sthánam in the Sus'ruta Samhitá which treats of the Nidánam of the diseases of the mouth.

Here ends the Nidána Sthánam.



THE
SUSŪRUTA SAMHITA
ŚĀRIRA STHĀNAM.

(SECTION ON ANATOMY).

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CHAPTER I.

Now we shall discourse on the Śārīram which treats of the science of Being in general (**Sarva-Bhuta Chintā Śārīram**). 1.

The latent (lit : unmanifest) supreme nature (**Prakriti**) is the progenitor of all created things. She is self-begotten and connotes the three fundamental or primary virtues of Sattva, Rajas and Tamas. She is imaged or embodied in the eightfold categories of **Avyakta** (unmanifest), Mahān (intellection), Ahamkāra (Egoism) and the five Tanmātras or elementals (proper sensibles) and is the sole and primary factor in working out the evolution of the universe. The one absolute and original nature is the fundamental stone house of materials out of which the bodies of all self-conscious (Karma-Purusha) working agents (agents who come into being through the dynamical energy of their acts or Karmas) have been evolved in the same manner as all water, whether confined in a tank or a reservoir, or coursing free through the channels of streams and of mighty rivers, have been welled up from the one and shoreless primordial ocean. 2.

Out of that latent unmanifest (**Avyakta**) or original nature (impregnated by the atoms or elemental units of



consciousness or Purushas) Intellection or Mahán has been evolved, and out of Mahán egoism. This Mahán or intellection should be likewise considered as partaking of the three fundamental attributes (Sattva, Rajas, and Tamas) of the latent (Avyakta) or original nature.* Ahamkára or egoism in its turn may be grouped under three subheads as the Vaikárika Taijasa (operative) or Rájasika, and Bhutádi (illusive or Tâmasika). 3.

The eleven organs of cognition, communication or sense perception have emanated from the co-operation of the aforesaid Vaikárika Ahamkára with the Taijasa or Rajasa. They are the ears, skin, eyes, tongue, nose, speech, hands, genitals, anus, feet and the mind (Manah). Of these foregoing organs the first five are intellectual or sense organs (Vuddhi-Indriya); the next five being operative (Karma-Indriya). The mind (Manah) partakes of the character of both the intellectual and operative organs alike. 4-5.

The five Tanmátras or elementals (or the five proper sensibles of hearing, touch, sight, taste, and smell) characterised by the Nescience, etc. have been evolved out of the Bhutádi etc. (or Tâmasa Ahamkára) concerted with the Taijasa Ahamkára through the instrumentality of the Vaikárikam. The gross or perceptible modifications of these five Tanmátras are sound, touch, taste, sight and smell. From the combination of the aforesaid five Tanmátras (Bhutádi) taken one at a time, have successively emanated the five gross matters of space such as

* Sattva, Rajas and Tamas :—Adhesion, cohesion and disintegration in the Physical plane ; affection, love and hate in the moral ; emancipation, spiritual affinity and sin in the Psychic.

Simply phenomenal or the simple outcome of the phenomenal evolution without being by other specific attributes of matter and hence Sâttvika or illuminating or quasi-spiritual.



ether, air, heat, (fire,) fluid (water), and earth (solid). These twenty four categories combinedly form what is technically known as the twenty four elements (**Tattvas**). Thus we have discoursed on the twenty four fundamental principles (Chaturvins'ati-tattvam). 6.

Hearing, touch, sight, taste and smell respectively form the subjects of the five intellectual (Vuddhi) organs of man, whereas the faculty of speech, handling, pleasure, ejections or evacuation, locomotion successively belong to the (remaining) five operative (Karma-Indriya) ones. The original nature (Avyakta), Mahán* (intellection), Egoism (Ahamkára), the five sensibles (Tanmátras), and the five gross material principles in their nascent stage in evolution form what is included within the eight categories of Nature (Prakriti), the remaining sixteen categories being her modifications (Vikára). The objects of intellection (Mahán) and Egoism (Ahamkára) as well as of the sense organs of knowledge and actions are the material principles (Ádibhautika) though they are spiritual in themselves and in their nature.

The tutelary god of intellection (Buddhi) is Brahmá. The god Ívara is the presiding deity of the sense of egoism (Ahamkára); the moon god is that of the mind (Manah); the quarters of the heaven, of the ears; the wind god is that of the skin; the sun is that of the eyes; the water is that of the taste; the earth is that of the smell; the fire is that of the speech; Indra is that of the hands; Vishnu is that of the legs; Mitra is that of the anus and Prajápati is that of the organs of generations. 7.

* Mahán, Ahamkára and the five Tanmátras, though but modifications of the original Nature in themselves, have been included within the category of Nature (Prakriti) inasmuch as they form the immediately prior or antecedent conditions of the evolution of the phenomenal universe.



All the aforesaid (twenty-four) categories or elementals (Chaturvinsati-Tanmātras) are devoid of consciousness. Similarly the modifications of the primal cause of Prakriti such as the Mahat etc. are all bereft of consciousness in as much as the cause itself, the Avyakta or the original nature is devoid of it. The Purusha or the self-conscious subjectivity, enters into the primal cause (Mula-Prakriti or original Nature) and its necessary effect (the evolved out phenomena) and makes them endued with his own essence or self-consciousness. The preceptors and holy sages explain the proposition by an analogy that as the milk in the breast of a mother, though unconscious in itself, originates and flows out for the growth and sustenance of her child ; (as the semen in the organism of an adult male though devoid of consciousness, flows out during an act of sexual intercourse) ; so these twenty-four primary material principles (elementals), though unconscious in themselves, tend to contribute towards the making of the self-conscious self or the universal individual (the aggregate of limited or conditional selves) for the purpose of working out his final liberation or emancipation *i.e.*, attainment of the stage of pure consciousness or perfect knowledge. 8.

Now we shall describe the tracts which the Purusha (subjective or self-conscious reality) and Prakriti or nature (passive non-conscious eternity) pass in common as well as those wherein they differ from each other. 9.

Traits of commonalty:—Both the Purusha and Prakriti are eternal realities, both of them are unmanifest, disembodied, without a beginning or origin, eternal, without a second, all—pervading and omnipresent.

Traits of diversity :—Of the Purusha and the Prakriti, only the latter is non-conscious and possesses the three fundamental qualities of Sattva, Rajas and Tamas. Prakriti performs the function of the seed or in otherwords she lies inherent as the seed or the primary cause in the latter phenomenal evolution of the Mahat etc. and contributes the maternal element in the conception, development and birth of the primordial cosmic matter (phenomenal universe), fecundated by the Purusha (self-conscious subjectivity) in its different stages of evolution. These stages are called Mahat, Ahamkāra etc.; and Prakriti is not indifferent, as the Purusha is to the pleasures and misery of life. But the Purusha (units or atoms of consciousness), devoid of the threefold virtues of Sattva etc. are non-concerning hence non-producing and bereft of the seed-attributes of lying inherent in all as the primary cause of evolution. They are mere witnesses to the joys and miseries of life, and do not participate in their enjoyment though imprisoned in the human organism. 10

Since an effect is uniform in virtue to its producing cause, the evolutionised effects or products of the Prakriti such as the Mahat, Ahamkāra etc. must needs partake of the three fundamental qualities (Sattva, Rajas and Tamas) which are predicated of the Prakriti. In other words, these Mahat, Ahamkāra, etc. are but the modifications of the three fundamental qualities of Sattva, Rajas and Tamas. Moreover, certain authorities hold that the Purushas are units of self-consciousness, possessed of the three aforesaid qualities owing to their antecedent conditions or causes (the gross material universe) being permeated with and characterised by them. 11.



Metrical Text (Vaidyake.) :—It is asserted in the *Āyurveda* that it is only the gross-sighted ones and men capable of observing only the superficial appearances, who confound eternal order or sequence of things and events (*Śvabhāva*), God (*Īśvara*).* Time (*Kāla*), sudden and unlooked for appearances of the phenomena (*Yadrichchhā*), Necessity (*Niyati*) and transformation (*Parināma*) with the original Nature (*Prakriti*). The five different forms of matter (such as Ether etc) are nothing but the modifications or transformed states of the original nature and are characterised by the three universal qualities of *Sattva*, *Rajas* and *Tamas*, and all created things, whether mobile or immobile, should be considered as alike exponented by the same. In the Science of medicine the cause of a disease is the one sole aim to be achieved by means of administering proper medicinal remedies (matter), and hence the properties of matter are the only fit subject to be dealt with in a book on pharmacy. And further, because the immediately prior cause of the human organism is a proper and congenial admixture of the sperm and ovum (matter), the sense organs are the resultants of phenomenal—evolution of matter, and the objects of sense perception are equally material or phenomenal in their nature. 12—14.

Memorable verse :—A man by a particular organ of his body perceives the same matter which forms the proper object of that sense organ in as much as the perceiving sense organ and the perceived sensible are produced by the same material cause. The matter,

* The second factor according to *Sāṅkhya*, in the order of cosmic evolution, which as the seed of the universe, was hid in the burning disc of the central, primordial Sun, out of which the different solar systems have come into being.



which specifically forms the object of a particular sense organ, cannot be perceived by the other. We see a flower with the eyes and not with the nose. 15.

The Science of medicine does not lay down that the self-conscious **Selves** (Kshetrajna) are all pervading, but on the contrary it asserts that they are real and eternal and are born in the planes of divine, human or animal existence according to their good or evil deeds in life. The existence of these self-conscious entities can be ascertained duly by inference inasmuch as they are extremely subtle in their essence. The self-conscious self is possessed of infinite consciousness, is real and eternally subject to the process of being evolved out into a finite, organic individual through the dynamics of the combined sperm and ovum. The view is further corroborated by a dictum of the Śruti which holds that **Purusha** (individual) is nothing but a combination of a self-conscious self and the five kinds of matter (Mahābhūtas) formed into an organic body. This Purusha or individual, which is called Individual of action (**Karma-Purusha**), falls within the scope of the science and art of medicine.* 16—17.

* Here lies the difference between Sāṅkhya and Āyurveda. While the former discourses on in material character of the soul, the latter commences to discuss on the questions how the material environment in which the soul is said to inhabit is evolved, and how the inclusion of the spiritual within the material organism is effected.

Hence Sus'ruta's Physiology, like that of Charaka, is in the strictest sense of the word molecular and his science of life is an attempt at explanation of consciousness from the materialistic standpoint, which agrees with the views of modern western science. Intellect according to Sus'ruta is material and belongs to the same category which the Sāṅkhya system of philosophy in its explanation of evolution enumerates originally as seven. The soul, according to Sus'ruta, is an independent existence and is often associated with what is called life. Where there is life, there is a soul, and it is not everywhere the same. The soul in Sus'ruta is individual

The attributes of an organic individual :—Longing for pleasure, shunning of pain, enmity, energetic undertaking of work, respiration (Prána), emission of flatus (Apána), closing and opening of the eyelids, intellect (Vuddhi), sentiment (Manah), deliberation, discretion, memory, knowledge of art, perseverance, sensation and perception, are the attributes of an organic individual. 18.

Distinctive features of the different classes of mental temperaments :—An absence of all killing or hostile propensities, a judicious regimen of diet, forbearance, truthfulness, piety, a belief in God, spiritual knowledge, intellect, a good retentive memory, comprehension, and the doing of good deeds irrespective of consequences, are the qualities which grace the mind of a person of a **Sáttvika temperament**. Feeling of much pain and misery, a roving spirit, non-comprehension, vanity, untruthfulness, nonclemency, pride, an over winning confidence in one's own excellence, lust, anger and hilarity are the attributes which mark a mind of the **Rájashika cast**. Despondency, stupidity, disbelief in the existence of God, impiety, stupification and perversity of intellect, lethargy in action and sleepiness are the qualities which mark a mind of a **Támashika stamp**. 19,

The distinctive traits of the five material of Elements of the world :—The properties of **Ákása** (ether) are sound, the sense of hearing, porosity and differentia evolution of the veins, ligaments etc. into their characterised species (Viviktatá.)

राजिज्ज पुनश्च; and takes cognisance of sorrow, disease and death by its union with the body (परं महाभूते शरीरि सप्तवायः पुनश्च इत्याद्यन्ते). Hence the living frame together with the soul that is said to inhabit it forms the subject-matter of Ayurvedic medical treatment. Ed.



The properties **Váyu** (etherin) are touch, the skin, all functional activities of the organism, throbbing of the whole body (Spandana) and lightness. The properties of **Teja** (fire or heat) are form, the eyes, colours, heat, illumination, digestion, anger, generation of instantaneous energy and valour. The properties of **Ápa** (water or liquid) are taste, the tongue, fluidity, heaviness, coldness, oliginousness and semen. The properties or modifications of **Prithivi** (the earth matter or solid) are smell, the nose, embodiment and heaviness. 20.

Of these the ether or Akáśa abounds in attributes of the Sāttvika stamp, the Váyu or etherin in Rājashika, the Teja in Sāttvika and Rājashika, the water in Sāttvika and Tāmashika and the earth in Tāmasha attributes. 21.

There are Memorable Verses:—These qualities are found to characterise and enter into the successive elements in the order of their enumeration. The specific attributes of these elements are manifest in the substances which are respectively originated from them. The term Prakriti or original nature connotes the eight categories (of Avyakta, Mahán, Ahamkára, and the five Tanmátras) and the rest of the twenty four fundamental principles are its modifications. The Purusha forms the twentyfifth principle. These twentyfive fundamental principles of cosmogony have been dealt with in the present treatise (Śálya-Tantram) as well as in the other treatise (Śálakya-Tantram and Sánkhyā Philosophy). 22—23.

Thus ends the first Chapter of the S'ārira Sthānan in the Sus'ruta Samhitā which deals with the science of Being in general.



CHAPTER II.

Now we shall discourse on the Śáriram which treats of the purification of semen and cataminal fluid etc. (**Śukra-Sonita-Śuddhirnáma Śáriram**). 1.

A man is incapable of begetting children, whose seminal fluid, affected by the aggravated Váyu, Pittam or Kapham, emits a cadaverous smell, or has acquired a clotted or shreddy character or which looks like putrid pus, or has become thin, or smells like urine or stool. 2.

Deranged Semen :—Semen vitiated by the deranged Váyu acquires a (reddish-black) colour and gives rise to a pain (piercing and cutting etc.) which characterises the Váyu (at the time of being emitted). Similarly semen deranged by the Pittam gets a (yellowish or bluish etc.) colour and produces the specific pain (burning and sucking etc.) of the deranged Pittam (at the time of emission). Semen vitiated by the action of the deranged Kapham has a (white) colour and produces the pain (itching sensation etc.) peculiar to the deranged Kapham (at the time of its outflow). The semen vitiated by blood is tinged with a bloody hue, produces all kinds of pain peculiar to the deranged Sonita (Pittam). The semen smells like a putrid corpse and is emitted in large quantities. The shreddy or clotted character of the fluid (**Granthila**) should be ascribed to the action of the deranged Váyu and Kapham. If vitiated by the action of the deranged Pittam and Kapham it looks like putrid pus (**Puti-puya**). Thin semen is caused by the deranged Váyu and

Pittam as described before. A concerted action of the deranged Vāyu, Pittam, and Kapham causes the semen to smell like urine or fecal matter. Of these, the cadaverously smelling, shreddy and clotted, putrid pus-like and thinned semen can be remedied and corrected only with the greatest difficulty ; while the one, having the smell of stool or urine, should be regarded as beyond cure. The remaining kinds are curable. 3.

Deranged Ārtavam :—The catamenial fluid (Ārtavam) of a woman vitiated by the deranged Vāyu, Pittam, Kapham, or blood, either severally or in combination of two or more Doshas should be likewise considered as unfit for the purpose of fecundation. Vitiating catamenial fluid exhibits the characteristic colour and pain of the deranged Doshas or blood (underlying at its roots). Of the several kinds (of vitiating catamenial fluids) those which smell like a putrid corpse or fetid pus, or which is clotted, or is thin, or emits the smell of urine or fecal matter, should be deemed as being beyond remedy, the rest being amenable. 4.

Memorable Verses :—The first three types of seminal derangements or defects should be corrected by an intelligent physician with an application of medicated oil etc. (Sneha-karma), diaphoretic measures etc* or urethral injections (Uttara-vasti). A medicated Ghrita prepared with a (decoction and Kalka of) *Dhātaki* flowers, *Khadira*, *Dādima* and *Arjuna* barks should be given to drink to a man whose semen emits a cadaverous smell (Kunapa). As an alternative, a medicated Ghrita prepared with (a decoction and levigated paste or Kalka of) the drugs forming the *Sālasārdī* group should be given to him. In a case of

* The word "Ādi" in the text includes emetics, purgatives, Anuvāsana and Āsthāpana measures according to their specific Doshas.

clotted and shreddy semen (*Granthi*), the patient should be made to drink a medicated *Ghrīta* prepared with a (decoction and *Kalka* of) *S'athi*, or with an alkaline solution prepared from the ashes of the burnt *Palās'ha* wood. In the case of a pus-like appearance of the fluid the patient should be treated with the medicated *Ghrīta* prepared with (a decoction and *Kalka* of) the drugs included within the groups of *Parushakādi* and *Vatādi* (*Nyāgrodhādi*) *Ganas*. In a case of thin semen, measures laid down under the same head before, as well as those to be hereafter described should be resorted to. Similarly a medicated *Ghrīta*, prepared with (a decoction and *Kalka* of) *Chitrakk* roots, *Ushira* roots and *Hingu*, should be drunk in a case of the semen smelling like urine or fecal matter. In all cases of seminal disorders as well as in menstrual anomalies, *Uttara-Vshti* (urethral or vaginal injection) should be made after having recourse to the application of medicated oil etc. (*Sneha-karma*, purgatives, emetics, *Āsthāpana* and *Anuvāsana* measures. 5—12

Treatment of deranged Ārtava:—In all the four cases when the catamenial blood would be found to be vitiated (by the deranged *Vāyu*, *Pittam*, *Kapha* or *Śonita*), the preliminary remedial measures of the application of oil etc. purgatives etc. (*Pancha-karma*) should be first employed and then the following measures should be undertaken *viz.* application of **Kalka**, (levigated paste of drugs), **Pichu** (medicated plugs—pecharies etc), **Pathya** (diet) and **Āchamana** (washes with decoctions) as described under the treatment of Gyonœcological cases etc. Appearance of clots of blood (*Granthi*) in place of the healthy menstrual fluid would indicate, decoction or a pulverised compound of *Pāthā*, *Trushuna* and *Vrikshaka* (*Kutaja*).

A decoction of *Bhadras'riyam** and *Chandanam* is indicated in the case when the menstrual fluid would smell like fetid pus, or contain marrow. The remedies described under the head of seminal disorders, should be likewise prescribed in cases of menstrual anomalies caused by the action of the deranged Váyu, Pittam and Kaphah according to the requirements of each individual case under treatment. Sáli-rice, barley, wine and meat with cholagogue properties should be deemed as a wholesome diet in these cases. 15—16.

Traits of pure and healthy semen and menstrual blood :—Semen which is transparent like crystal, fluid, glossy, sweet and emits the smell of honey ; or like oil or honey in appearance according to others, should be considered as healthy. The catamenial blood (Ártava) which is red like the blood of a hare, or the washings of shellac and leaves no stains on cloths (which may be washed off by simply soaking them in water) should be considered as healthy. 17—18.

Asrigdara (Menorrhagia) :—An abnormal or excessive discharge of the menstrual blood (Ártava), or its long persistence even after the wonted time, or its appearance at a premature or unnatural period (as well as contrarity in its colour or properties) is called **Asrigdara**. All types of the disease (Asrigdara) are attended with an aching in the limbs and a painful flow (of the catamenial fluid). In case of excessive hæmorrhage (from the uterus), symptoms such as weakness, vertigo, loss of consciousness, darkness of vision, or difficult breathing, thirst, burning (sensation of the body), delirium, palour, somnolence and other Vátaja

* Bhadras'riyam is S'richandanam according to Dallana or white Sandal wood according Gayádasa.



troubles (convulsion, hysteria etc.) may set in. A physician should treat a case of Asrigdara with measures and remedies as laid down under the head of **Rakta-pittam** (hoemorrhage) in a case when the patient is young (of sixteen years), careful in her diet, and the disease unattended with severe complications. 19—21.

Amenorrhœ :—In a case of suppression of menstruation (**Amenorrhœ**) caused by the obstruction of the deranged Doshas (*Vāyu* and *Kapham*) in the passage, the patient should be advised to take fish, *Kulaththa* pulse, *Māsha* pulse, *Kāñjikam* (fermented sour gruel etc.), *Tila*, wine (*Surā*), cow's urine, whey, half diluted *Takra*, curd and *S'uktam* for her diet. The symptoms and treatment of thin and scanty menstruation have been described before. Still in such a case measures laid down for the treatment of **Nashta-Rakta** (amenorrhœ) may be adopted. Under a course of treatment described as before, the semen or the catamenial blood of a person would be ^{restored} ~~resorted~~ to their healthy and normal condition. 22—23.

A woman with (healthy) catamenial flow should forego the bed of her husband during the first three days of her uncleanness, as well as day sleep and collyrium. She shall not shed tears nor bathe, nor smear her person (with sandal paste etc.), nor anoint her body, nor pare her nail, nor run, nor indulge in loud and excessive laughter and talk, nor should she hear loud noise, nor comb her hair, nor expose herself to droughts, nor do any fatiguing work at all ; because if a woman sleeps in the day time (during the first three days of her period) her child of subsequent conception becomes sleepy or somnolent. The woman who applies collyrium along her eyelids (during those days), gives

birth to a blind child ; by shedding tears (during her period) a woman gives birth to a child of defective eyesight ; by bathing or smearing her body (with sandal paste etc.) a miserable one ; by anointing her body a leper (Kushthi) ; by paring her nails a child with bad nails ; by running a restless one ; by indulging in excessive laughter, a child with brown (Syàva) teeth or palate or tongue ; by excessive talking a garrulous child or one of incoherent speech ; by hearing loud sounds, a deaf child ; by combing her hair, a bald one ; whereas by exposure to the wind or by doing fatiguing work (during the first three days of her period) she gives birth to an insane child (conceived immediately after it). Hence these acts (day sleep etc) are to be avoided. 24.

Regimen to be observed in her menses :—A woman in her menses should lie down on a mattress made of *Kus'a* blades (during the first three days of her uncleanness), should take her food from her own blended palms or from earthen saucers, or from trays made of leaves. She should live on a course of Habishya diet and forswear during the time, even the sight of her husband. After this period, on the fourth day she should take a ceremonial ablution, put on a new (untorn) garment and ornaments and then visit her husband after having uttered the words of necessary benediction. 25.

Metrical Text :—A child conceived after the period resembles the man whom she first sees after ablution on the fourth day of her menses ; hence she should see none but her husband* at that time (so that the child may resemble his father). After that the priest shall perform the rites (Garbhàdhàna ceremony),

* In the case of the husband being absent at the time, she should look at the sun.



to help the conception of a male child and after the ceremony a wise husband should observe the following rules of conduct. 26—27.

Conduct of Husband :—A husband wishing to beget a son by his wife, should not visit her bed for a month (before the day of the next flow). Then on the fourth day of her uncleanness, he should anoint or lubricate his body with Ghrita, should partake of a food in the afternoon or evening composed of boiled *S'ali* rice, milk and clarified butter, and then visit the bed of his wife. The wife also, in her turn, should observe a similar vow of sexual abstinence (*Brahma-chārini*) for a month before that day on which she should anoint or lubricate her body with oil, partake of food largely composed of oil and *Māsha* pulse, and then meet her husband at night. The husband then having uttered the appropriate Veda Mantras and having awakened confidence in the wife, should go unto her on the fourth, sixth, eighth, tenth or on the twelfth night of her menses for the progenation of a male child. 28.

Metrical Text :—A visit to the wife on any of these nights leads to the continual increase of the wealth, progeny, and the duration of the husband's life. On the other hand, a visit to one's wife on the fifth, seventh, ninth, or eleventh day of her flow leads to the conception of a female child. The thirteenth and the remaining days (till the next course) are condemned as regards intercourse. 29—30

Prohibited Period etc. :—A going unto one's wife on the first day of her monthly course tends to shorten one's life and a child born of the act dies immediately after its delivery. The same result is produced by a visit on the second day, or the child dies lying-in room *i.e.* ten days of its birth ; A visit on the third day

leads to the child's being deformed and short-lived. A child which is the fruit of a visit on the fourth day lives long, will be well developed and remain in the full vigour of health. The semen cast in the womb of a woman during the continuance of her monthly flow does not become fruitful because it is carried back and flows out in the same manner as a thing thrown into a stream does not go against but is carried away with the current. Hence a husband should foreswear the company of his wife during the first three days of her uncleanness, when she also should observe a vow of sexual abstinence ; the husband should not visit his wife within the month (after the twelfth day of her menses). 31.

After the impregnation on any of these nights, three or four drops (of the expressed juice) of any of the following drugs such as *Lakshand*, *Vata-S'ungd*, *S'ahadevd* or *Vis'vadevd*, mixed with milk should be poured into the right nostril of the enceinte for the conception of a male child and care should be taken that she does not spit it away. 32.

Metrical Text :—A co-ordination of the four factors of menstrual period (**Ritu**), healthy womb (**Kshetra**), nutrient liquid *i.e.* chyle of digested food (**Ambu**), healthy semen (**Vija**) and the proper observance of the rules is necessary for the conception and development of a healthy child just as the proper season (**Ritu**), good soil (**Kshetra**), water (containing nutrient matter) and vigorous seeds (**Vija**) together with proper care, help the germination of strong and undiseased sprouts. A child which is the fruit of such conception is destined to be beautiful, of vigorous health, generous, long-lived, virtuous, attached to the good of its parents and capable of discharging its parental obligations. 33.



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Causes of different colours of the Child:

—The fiery principle (Teja-dhātu) of the organism, which is the originator of all colours of the skin (complexion), happening to mix largely with the watery principle of the body at the time of conception, serves to make the child a fair complexioned one (Gaura-varna); mixed with a large quantity of the earth principle (Kshiti) of the body, it makes the child a dark complexioned one (Krishna-varna). In combination with a large quantity of earth and ethereal principles of the organism, it imparts a dusky (Krishna-syāma) complexion (to the full developed foetus). A similar combination of watery and ethereal principles serves to make the child dusky yellow (Gaura-syāma). Others on the contrary aver that the complexion of the child is determined by the colours of the food taken by its mother during the period of gestation. 34.

A child is born blind in the failure of the fiery principle (Teja-dhātu) of the organism in reaching the region of its still undeveloped eyes (part—where the eyes would be); so also a penetration by the same (Teja-dhātu) into its blood accounts for the blood-shot eyes of the child. Entered into the Pittam it makes the child a yellow-pupiled one (Pingalāksha). Entered into its bodily Kapham it makes it a white-eyed body and mixed with its bodily Vāyu, a child of defective eyesight. 35.

Memorable verses:—As a lump of condensed clarified butter melts and expands if placed by the side of a fire, so the ovum (Ārtava) of a woman is dislodged and glides away in contact with an adult male*.

* Sus'rutā's theory is that ovulation occurs about the same time as menstruation and rather initiates the latter, and the shed ova are washed out with the menstrual flow, hence there is a possibility of conception on

A seed divided into two by the deranged Vāyu within the (cavity of the) uterus (Kukshi) gives rise to the birth of **twins**, conditioned by the good or evil deeds of their prior existence.* A child born of scanty paternal sperm becomes an **Āsekya** and feels no sexual desire (erection) without previously (sucking the genitals and) drinking the semen of another man. A child begotten in a sordid vagina is called a **Sougandhika**, whose organ does not respond to the sexual desire without smelling the genitals of others. The man who first becomes a passive member of an act of sodomy and then again commits sodomy with the woman (he visits) is called a **Kumbhika** (or Guda-yoni and is included within the category of a Kliva). 36—40.

The man who cannot copulate with a woman without previously seeing the sexual intercourse of another couple is called **Irshaka**. A child born of an act of fecundation foolishly or ignorantly effected during the menses of its mother by its progenitor by holding her on his bosom during the act is called a **Shanda** and invariably exhibits effeminate traits in his character. A daughter born of a woman riding on her husband during the act of sexual intercourse will develop masculine traits in her character. 41—43.

connexion during the period of flow. But when the menstruation stops of itself by the end of the third day, it also indicates that ovulation has ceased and no ovum is left to be fertilized, hence the question arises how can there be conception then on connexion on the fourth day and thereafter? The explanation (as in the following verse) is that the ovulating organ though quiescent at the time is again stimulated to activity by intercourse with a male and new ova are shed which are ready to be fertilized by the semen.—Ed.

* Gayi interprets the term "Dharmetara" to mean evil deeds (other than good) and quotes verses from S'rutis, S'mritis and Tantras on expiations of sin in support of his view,



Semen is developed in the four types of Kliva known as Āsekya, Sougandhika, Kumbhika and Irshaka, whereas a Shanda is devoid of that fluid (Śukra). The semen carrying ducts of an Āsekya etc. are expanded by the drinking of the semen as above described which helps the erection of his reproductive organ. 44-45

✓ The conduct and character of a child and its inclination to particular dietary are determined by those of its parents during the act of fecundation. A boneless (*i. e.* with cartilaginous bones) monstrosity is the outcome of the sexual act in which both the parties are female and their Śukra (sexual secretion) unite somehow or other in the womb of one of them. Fecundation may take place in the womb of a woman, dreaming of sexual intercourse in the night of her menstrual ablution. The local Vāyu carries the dislodged ovum into the uterus and exhibits symptoms of pregnancy, which develop month after month till the full period of gestation. The offspring of such a conception is a **Kalala** (a thin boneless jelly-like mass) on account of the absence of the paternal elements* in its development. Such monstrosities as serpents, scorpions, or gourd shaped foetus delivered from the womb of a woman should be ascribed as the effects of deadly sins. 46-49.

✓ The child of a mother whose wishes are not honoured and gratified during pregnancy stands in danger of being born palmless, hunchbacked, lame, dumb or nasal voiced through the deranged condition of the Vāyu of its mother's body. The malformation of a child in the womb should be ascribed to the atheism of its parents, or to the effects of their misdeeds in a prior existence, or

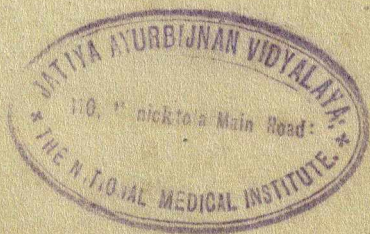
* Hair, beard, nails, teeth, arteries, veins, ligaments and semen are called paternal elements inasmuch as these are said to be inherited by the child from its father

to the aggravated condition of the Vāyu, Pittam and Kapham. 50—51.

A foetus in uterus does not excrete fæces or urine, owing to the scantiness of the fecal matter, etc., in its intestines and also to the obstruction and consequently lessened admission of the Vāyu into its lower bowels. A child in the womb does not cry inasmuch as its mouth remains covered with the sheath of the *placenta i.e. foetal membranes* (Yarāu) and its throat is stuffed with Kapham. The processes of respiration, sleeping and movement of the foetus in the womb are effected through those of its mother. 52—53.

The adjustment of the different limbs and organs of the body of a child in the womb at their proper places, the non-development of hair on its palms and soles and the subsequent cutting and falling off of its teeth are spontaneously effected according to the laws of nature after the model of its own species. An honest, pious, erudite man, who has acquired a vast knowledge of the Sāstras in his prior existence, becomes largely possessed of mental traits of the Sāttvika stamp in this life too and also remembers his prior births (*Jātismara*). Acts similar to those, which a man performs in a prior existence, overtake him also in the next. Similarly the traits and the temperament which he had developed in a previous existence are likewise sure to be patent in the next. 54—55.

Thus ends the second Chapter of the S'arira Sthānam in the Sus'ruta Samhitā which treats of the purification of sperm and ovum.





CHAPTER III.

Now we shall discourse on the Śáriram which treats of pregnancy, etc. (**Garbhá Vakránti Śáriram**). 1.

The male reproductive element (Śukra) is endowed with Śoma-guna (i.e., thermolytic properties) the female element Ārtava) presents the opposite property and is therefore Agni-guna (i.e., thermogenetic properties). The principles of earth, water, fire, air and ether are also present in men in their subtile forms and contribute to the formation of the material parts by their molecular adjustment in the way of supplying nutrition and in way of the adding to their bulk. 2.

Combination of Self with the impregnated matter :—The local Váyu (nerve-force) heightens or aggravates the heat generated by the friction of the sexual organs in an act of copulation. The Váyu and heat thus aggravated tend to dislodge the semen from its sac or receptacle in a man which enters into the uterus of a woman through the vaginal canal and there it mixes with the ovum (Ārtavam) dislodged and secreted by similar causes. The combined ovum and semen are subsequently confined in the uterus (Garbhásaya). After that, He who is known by the epithet; of **Self-conscious**, impressioner (creator of sensations and perceptions), toucher, smeller, seer, hearer, taster, Self or Ego, creator, wanderer, witness, ordainer, speaker, though eternal, unmanifested and incomprehensible in his real nature, takes hold of the five subtile or essential material principles contributed by the united impregnating matter, assumes a subtile shape throughout, marked by the three fundamental

qualities of Sattva, Rajas and Tamas, and led away by the Váyu, lies confined in the uterus to be subsequently evolved out in the shape of a god, animal, or monster, as determined by his acts in the former existence. 3.

Factors which determine sex:—The birth of a male-child marks the preponderance of semen over the ovum (in its conception); the birth of a daughter shows the preponderance of the maternal element. A child of no-sex (hermaphrodite) is the product when ovum and sperm are equal (in their quality and quantity). The first **twelve nights** after the cessation of the flow should be deemed as the proper period for conception, as being the time during which the ova are secreted. Certain authorities hold that there are women who never menstruate to all appearances. 4—5.

Memorable verses:—The face of a woman (lit: a woman of undetected menstruation) becomes full and lively. A moist and clumsy deposit is found on the body, face, teeth and gums. She feels a desire for sexual intercourse and speaks sweet words. Her eyes, hair, and belly droop down. A sort of distinct throbbing is felt in her arms, thighs, mammæ, umbilicus, perineum and buttocks. Her sexual desire grows intense and prominent, and its gratification gives her utmost joy and pleasure. These symptoms will at once indicate that a woman has menstruated (internally). 6.

Just as the petals of a full blown lotus flower are gathered up during the night, so the uterus (Yoni) of a woman is folded up (*i.e.*, as of the uterus is closed) after the lapse of the menstrual period (*i.e.* fifteen days from the date of the flow). The menstrual flow, accumulated in the course of a month, is led in time by the local Váyu through its specific duct (Dhamani) into the mouth of



the uterus (Yoni) whence it flows out odourless and blackish. 7.

Period of Menstruation:—The process (menstruation) commences at the twelfth year, flowing once in every month, and continues till the fiftieth* year when it disappears with the sensible decay of the body. 8

A visit† to one's wife on even days during the catamenial period (twelve days in all from the cessation of the flow) leads to the conception of a male child while an intercourse on odd days results in the birth of a daughter. Hence a man, seeking a male-issue, should approach his wife for the purpose in a clean body and with a quiet and calm spirit on an even date. 9.

A sense of fatigue and physical languor, thirst, lassitude and weariness in the thighs, suppression of the flow of semen and menstrual secretion (Śukra and Sonita) out of the uterus (Yoni), and throbbing in the organ (after coition) are symptoms of a recent fecundation. 10.

Signs of Pregnancy—(M. T.):—A black rash (areola) around the nipples of the mammae, the rising appearance of a row of hair (as far as the umbilicus), contractions of the eye-wings, sudden vomitings, nausea which does not abate even on smelling perfumes, water-

* Some are of opinion that the menstruation continues up to the sixtieth year.

† According to Videha, menstrual secretion flows less on even days, hence a son is born if the sexual intercourse be made on those days; whereas menstrual secretion becomes more on odd days, so a daughter is born if the intercourse be made on odd days.

According to Bhoja, a son is born from intercourse on even days and a daughter is born from that on odd days. The birth of a male issue is due to the preponderance of semen virile and that of a female sex is due to the preponderance of menstrual secretion. If both the secretions be equal (in quality and quantity) a hermaphrodite is issued.

brash, and a sense of general lassitude are the indications of pregnancy. 11.

Prohibited conducts during gestation :—Immediately on the ascertainment of her pregnancy, a woman should avoid all kinds of physical labour, sexual intercourse, fasting, causes of emaciation of the body, day-sleep, keeping of late hours, indulgence in grief, fright, journey by carriage or in any kind of conveyance, sitting on her haunches, excessive application of Sneha-karmas etc., and venesection at an improper time (*i.e.*, after the eighth month of gestation), and voluntary retention of any natural urging of the body. 12.

Metrical Text :—The child in the womb feels pain in the same part of its body as the one in which its mother feels any ; whether this (pain) may be from an injury or through the effect of any deranged morbid principle (Dosha) of her organism. 13.

Development of the Foetus :—In the first month of gestation a gelatinous substance is only formed (in the womb) ; the molecules of the primary elements (Mahábhuta—air, fire, earth, water, and ether) being acted upon by cold (Kapham), heat (Pittam) and air (Váyu or nerve-force) are condensed in the second month. A lump-like appearance (of that confused matter) indicates the male-sex (of the embryo). An elongated-like shape of the matter denotes that the foetus belong to the opposite sex ; whereas its tumour-like shape (like a Sálmalí-bud) predicts the absence of any sex (*i.e.* a hermaphrodite). In the third month, five lump-like protuberances appear at the places where the five organs—namely the two hands, two legs and the head—would be and the minor limbs and members of the body are formed in the shape of extremely small



papillæ. In the **fourth month** all the limbs and organs (of the body of the embryo) become more potent and the foetus is endowed with consciousness owing to the formation of viscus of the heart. As heart is the seat of consciousness, so as the heart becomes potent, it is endowed with consciousness and hence it expresses its desire for things of taste, smell etc. (through the longings of its mother). The enciente is called double-hearted (**Dauhrida**) at the time, whose wishes and desires—not being honoured and gratified—lead to the birth of a paralysed, hump-backed, crooked-armed, lame, dwarfed, defect-eyed, and a blind child. Hence the desires of the enciente should be gratified, which would ensure the birth of a strong, vigorous and long-lived son. 14.

Memorable Verses:—A physician should cause the longings of a pregnant woman (**Dauhrida**) to be gratified inasmuch as such gratifications would alleviate the discomforts of gestation; her desires being fulfilled ensure the birth of a strong, long-lived, and virtuous son. A non-fulfilment of her desires during pregnancy, proves injurious both to her child and her ownself. A non-gratification of any sensual enjoyment by its mother (**Dauhrida**) during gestation tends to painfully affect the particular sense-organ of the child.

Longings and its effects during pregnancy:—An enciente longing for a royal interview during her gestation (fourth month) gives birth of a child, who is sure to be rich and to hold a high position in life. Her longing for fine silks, clothes, ornaments etc. indicates the birth of a beautiful child of æsthetic taste. The birth of a pious and self-controlled child is indicated by its mother's longing

for a visit to a hermitage. The desire of a pregnant woman to see a divine image or an idol, predicts the birth of a child in her womb who would grace the council of an august assembly in life. Similarly, a desire to see a savage animal on the part of a pregnant woman signifies the presence of a child of savage and cruel temperament in her womb. A desire for the flesh of a Godhà indicates the presence of a sleepy, drowsy person in her womb who would be tenaciously fond of good things in life. Similarly a longing for beef on the part of the mother (during gestation) indicates the birth of a strong and vigorous child capable of sustaining any amount of fatigue and physical pain. A longing for buffalo-meat of the mother indicates the birth of a hairy, valiant and red-eyed child (in her womb); a longing for boar-flesh indicates the birth of a drowsy child though valiant; a longing for venison indicates that of an energetic, determined and sylvan-habited child; a longing for Srimàra-meat indicates that of a distracted person; a longing for the flesh of Tittira bird indicates that of a child of timid disposition; whereas a desire on the part of an enciente for the flesh of any particular animal indicates that the child in the womb would be of such stature and would develop such traits of character in life as are peculiar to that animal. The desires of a woman during her pregnancy are determined by ordained fate and effects of the acts of the child in its prior existence (that are to be happened during the present life). 15.

Development of the Foetus:—In the **fifth month** the foetus is endowed with mind (Manah) and wakes up from the sleep of its sub-conscious existence. In the **sixth month** cognition (Buddhi) comes in. In the **seventh month** all the limbs and members



of its body are more markedly developed. The Ojo-dhātu (in the heart of the foetus) does not remain silent in the **eighth month*** A child born at that time (eighth month) dies for want of Ojo-dhātu soon after its birth, a fact which may be equally ascribed to the agency of the malignant monsters. Hence (in the eighth month of gestation) offerings of meat should be made to the demons and monsters (for the safe continuance of the child). The parturition takes place either in the ninth, tenth, eleventh or twelfth month of conception, otherwise something wrong with the foetus should be apprehended. 16.

The umbilical chord (Nádi) of the foetus is found to be attached to the cavity of the vein or artery of its maternal part through which the essence of lymph-chyle (Rasa) produced from the assimilated food of the mother, enters into its organism and fastens its growth and development, (a fact which may be understood from the analogy of percolation or transudation of blood). Immediately after the completion of the process of fecundation, the vessels (Dhamani) of its maternal body which carry the lymph-chyle (Rasa) and run laterally and longitudinally in all directions through it, tend to foster the foetus with their own transudation all through its continuance in the womb. 17.

Different opinions on the formation of the foetal body :—Śaunaka says that probably the head of the foetus is first developed since head is the only organ that makes the functions of all other organs possible. Kritaviryya says, it is the heart that is first developed since heart is the seat of Manah and Buddhi (mind and intellect). The son of

* Sometimes it passes from the body of the child to that of the mother and *vice versa*.

Parasara says that the development of the umbilical region of foetus must necessarily precede (that of any other part of its body) inasmuch as it is through umbilical chord that an embryo draws its substance from mother's body. **Mārkandeya** says that the hands and feet of a foetus are first to be developed since they are the only means of movements in the womb. **Subhuti Gautama** says that the development of the trunk is the earliest in point of time since all other limbs and organs lie soldered to and imbedded in that part of the body. But all these are not really the fact. **Dhanvantari** holds that the development of all the parts of the body of an embryo goes on simultaneously ; and they can not be perceived or detected in their earlier stages of development in the womb owing to their extremely attenuated size like a mango fruit or sprouts of bamboo. As the stone, marrow, pith etc. of a ripe and matured mango-fruit or the sprouts of bamboo, cannot be separately perceived in the earlier stage of their growth but are quite distinguishable in the course of their development, likewise in the early stage of pregnancy the limbs and organs of the body (foetus) are not perceptible for their extremely attenuated stage but become potent (and therefore they are distinctly perceived) in the course of time for their development. 18.

Factors respectively supplied by the paternal and maternal elements :— Now we shall describe the parts and principles of the body of a foetus which are respectively contributed by the paternal element, maternal factor, the serum (Rasaja), the soul (Ātmaja), the natural (Sattvaja) and the innate physiological conditions (Sātmyaja). The hairs of the head and body, beard and moustaches, bones, nails, teeth, veins (Sira), nerves, arteries (Dhamanī),



semen and all the steady and hard substances (in the organism of a child) are contributed by the **paternal element** in the conception Pitraja ; whereas flesh, blood, fat, marrow, heart, umbilicus, liver, spleen, intestines, anus (Guda) and all other soft matters in the body owe their origin to the **maternal element** (Mátriya) ; strength, complexion, growth, rotundity and decay of the body are due to the **serum** (Rasaja). The sensual organs, consciousness, knowledge, wisdom, duration of life (longivity), pleasure and pain etc. are the outcome of the spiritual element in man (Átmaja). We shall describe the **Sattvaja** features of the body in the next chapter. Valour, healthfulness, strength, glow and memory are the products of a child naturally born with physiological conditions of the parents (Sátmyaja). 19.

Signs of male and female conception:—An enciente, in whose right mammæ the milk is first detected, who first lifts up her right leg at the time of locomotion, whose right eye looks larger, or who evinces a longing largely for things of masculine names, dreams of having received lotus flowers (red and white), Utpala, Kumuda, Ámrataka, or flowers of such masculine denomination in her sleep, or the glow of whose face becomes brighter during pregnancy, may be expected to give birth to a male child ; whereas the birth of a daughter or a female child should be pre-assumed from the contriety of the foregoing indications. An enciente whose sides become raised and the forepart of whose abdomen is found to bulge out will give birth to a sex-less (hermaphrodite) child. An enciente, the middle part of whose abdomen becomes sunk or divided in the middle like a leather-bag, will give birth to a twin. 20.

Memorable verses :—Those women who are devout in their worship of the gods and the Bráhmíns and cherish a clean soul in a clean body during pregnancy are sure to be blest with good, virtuous and generous children ; whereas a contrary conduct during the period is sure to be attended with contrary fruits. The development of the limbs and the members etc. of a foetus in the womb is natural and spontaneous, and the qualities and conditions which mark these organs are determined by the acts of the child which are anterior to its genesis and were done in its prior existence. 21-22.

Thus ends the third Chapter of the S'árira Sthánam in the Su 'ruta Samhità which treats of the generation and pregnancy.



CHAPTER IV.

Now we shall discourse on the Śáriram which treats of the development of a foetus in the womb, as well as of the factors which contribute to the growth of its different bodily organs and principles (**Garbha-Vyakáranam-Śáriram**). 1.

The Pittam (fiery or thermogenic) and Śleshma (lunar principles of the body, the bodily Váyu, the three primary qualities of Sattva, Rajas, and Tamas (adhesion, cohesion and disintegration), the five sense organs, and the Self (Karma-Purusha) are the preserver of the life (Pránáh) of the Foetus. 2.

Folds of Skin :—Seven folds or layers of covering (Tvaka—skin) are formed and deposited on the rapidly transforming product of the combination of (semen) Śúkra and Śonita (fertilized ovum) which have been thus charged with the individual Soul or Self in the same manner as layers (of cream) are formed and deposited on the surface of (boiling) milk. Of these the first fold or layer is called **Avabhásini** (reflecting) as it serves to reflect all colours and is capable of being tinged with the hues of all the five material principles of the body. The thickness of this fold measures eighteen-twentieth of a *Vrihi** (rice grain) and it is the seat of skin diseases, such as Sidhma, Padma-

* The complexion of a person is due to this first layer ; and as the colour of an opaque body is due to the rays that are reflected from its surface, this layer is rightly named Avabhás'ini or reflecting layer.

** The text runs "Vriherashtadashabhága," which means eighteen (or so many) parts of a Vrihi ; and Dallan comments that "Vrihi" stands for a measure equal to the twentieth division of a Vrihi or rice grain,

kantaka etc. The second fold (from the surface) is called **Lohita**; it measures a sixteen-twentieth of a *Vrihi* and is the seat of such (cutaneous affections) as *Tilakálaka*, *Nyachcha* and *Vyanga* etc. The third fold or layer is called **Śveta**, which measures in thickness, a twelve-twentieth of a *Vrihi*, and forms the seat of such diseases as *Ajagalli*, *Charmadala*, and *Maśaka* etc. The fourth fold or layer is called **Támra** measuring an eight-twentieth of a *Vrihi* and forms the seat of such diseases as the various kinds of *Kilāsa* and *Kushtha* etc. The fifth fold or layer is called **Vedini**, measuring in thickness a five-twentieth of a *Vrihi* and forms the seat of *Kushtha*, *Visarpa*, etc. The sixth fold or layer is called **Rohini**, which is of equal thickness as a *Vrihi* (grain), and is the seat of *Granthi*, *Apachi*, *Arvuda*, *Ślipada* and *Gala-ganda* etc. The seventh fold or layer is called **Mānsa-dhara** twice a *Vrihi* in thickness and is the seat of *Bhagandara*, *Vidradhi*, and *Arsā* etc. These dimensions should be understood to hold good of the skin of the fleshy parts of the body, and not of the skin on the forehead, or about the tips of the fingers, inasmuch as there is a surgical dictum to the effect that an incision as deep as the thickness of the thumb may be made into the region of the abdomen with the help of a *Vrihi-mukha* (instrument). 3.

The **Kalās** too number seven in all and are situated at the extreme borders (forming encasement and support) of the different fundamental principles (*Dhātus*) of the organism. 4.

Memorable Verses :—As the duramen or core of a piece of wood or stem becomes exposed to view by cutting into it, so the root principles (*Dhātus*) of the body may be seen by removing the successive layers or



tissues of its flesh. These Kalás are extensively supplied with Snáyus (fibrous tissues), bathed in mucous, and encased in a membranous covering. 5-6.

Mánsadhará-Kalá:—Of these Kalás, the first is named **Mánsadhará** (fascia), in the contained flesh (bodily substance of the Kalá) of the Śirá (veins), Snáyus (fibrous tissues), Dhamani (arteries) and other Śrotas (channels) are found to spread and branch out. 7.

Memorable Verse:—As the roots and stems of a lotus plant respectively situated in the ooze and water (of a tank), do simultaneously grow and expand, so the veins etc. situated in the flesh, grow and ramify. 8.

Raktadhará-Kalá:—The second Kalá is called **Raktá-dhará** (Vascular tissue of the blood vessels etc.). The blood is contained in these inside the flesh and specially in the veins (Śirá) and in such viscera of the body as the liver and spleen. 9.

Memorable Verse:—As a plant containing latex in its tissues, when injured or pricked, exudes milky juice, so blood oozes out instantaneously on the flesh of the body (supplied with the Raktádhará-kalá) being injured. 10.

Medadhará-Kalá:—The third Kalá is called **Medadhará** (adipose tissue). Meda (fat) is present (chiefly) in the abdomen of all animals, as well as in the cartilages (small bones). The fatty substance present in large bones is called **Majjá** (marrow). 11.

Memorable Verse:—Marrow is found inside large bones, whereas a substance similar in appearance and found inside other bony structures (cartilages) should be considered as **Meda**, mixed with blood. The fats, present in purely muscular structures, go by the name of **Vasá** (muscle-fat). 12-13.

Śleshmādhara-Kalā :—The fourth Kalā is called Śleshmādhara (Synovial tissues) and is present about all the bone-joints of animals. 14.

Memorable Verse :—As a wheel easily turns upon a well greased axle, so the joints moistened by the mucous (Śleshma) contained in these sacs admit of easy movements. 15.

Purishadharā-Kalā :—The fifth kalā is called Purishadharā and being situated in the Kosta (abdomen) serves to separate the faecal refuse in the (Pakvāsaya) lower gut (from other ingested matters). 16.

Memorable Verse :—This Kalā extends about the liver, upper and lower intestines and other abdominal viscera and keeps the fœces in the lower intestines (Undukam) separate and hence is called Maladharā-kalā. 17.

Pittadharā-Kalā :—The sixth Kalā is called Pittadharā-kalā; it holds (the chyme derived from) the four kinds of solid and liquid foods (in the Pitta-sthānam or biliary region) propelled from the stomach (Āmāsaya or Grahani-Nādi) and on its way to the (Pakāsaya) intestines (for the proper action of the digestive juices upon it). 18.

Memorable Verse :—The four kinds of food, viz. those that are chewed, swallowed, drunk, or licked, and brought into the intestines (Kosta) of a man, are digested in proper time through the heating agency (action) of the Pittam. 19.

Śukradharā-Kalā :—The seventh Kalā is called Śukradharā (semen-bearing), which extends throughout the entire body of all living creatures. 20.

Memorable Verse :—The physician should know that like fat (Sarpi) in the milk, or sugar in the expressed juice of sugar-cane, the (seat of) semen is co-extensive with the whole organism of a man (or animal).



The semen passes through the ducts situated about two fingers' breadth on either side (vas deferens) and just below the neck of the bladder and finally flows out through the canal. The semen of a man during an act of sexual intercourse with a female under exhilaration comes down from all parts of his body owing to the extreme excitement (engendered by the act). 21-33.

The orifices of the *Ártava*—carrying channels (vessels of the uterine mucosa) of a pregnant woman are obstructed by the foetus during pregnancy and hence there is no show of menses (during gestation). The menstrual blood thus obstructed in its downward course ascends upwards; a part of it accumulates and goes to the formation of placenta (*Apará*), while the rest ascends higher up and reaches the breasts; this is the reason why the breasts of a pregnant woman become full and plump. 24.

The spleen and liver of the foetus are formed out of blood; the lungs are made of the froth of the blood; and the *Unduka* or fæcal receptacle, of the refuge matter (*Mala*) of the blood. 25,

Metrical Texts :—The intestines (*Antra*), the bladder (*Vasti*), and the anus (*Guda*) of the foetus are formed out of the essence of the blood and *Kapham*, baked by the *Pittam* into which *Váyu* enters as well. As fire fed by draughts of air refines the dregs of golden ore and transforms it into pure metal, so blood and *Kapham* acted upon by the heat of the *Pittam* are transformed into the shape of the intestines etc. in the abdomen. The tongue is made of the essence of the flesh, blood and *Kapham*. The *Váyu*, combined with heat (*Pittam*) in adequate proportion, rends through the internal channels into the flesh and transforms them into muscles (*Pesí*). The *Váyu*, by taking off

the oily principles of fat (Meda), transforms them into (Śirā and (fibrous tissues) Snāyu, the underbaked (Mridu) ones being converted into the Śirā and the overbaked (Kshara) ones into the Snāyu. The internal cavities (Āsayas) of the body mark the spots or regions where the Vāyu had constantly stayed in its embryo stage. 26-29.

The kidneys (Vrikkas) are made out of the essence of the blood and fat. The testes are formed out of the essence of the blood, flesh, Kapham and fat. The heart is formed out of the essence of blood and Kapham; and the vessels (Dhamanis) carrying the vital principles of the body are attached to it (heart). The spleen and the lungs are situated below and beneath the heart on the left side, and the liver and Kloma (Pancreas?) below and beneath it (heart) on the right. The heart is the special seat of consciousness (Chetanā) in all creatures. Sleep sets in when this viscus (heart) of a person becomes enveloped by the effects of the Tamas (principles of illusion or nescience). 30-31.

Memorable Verse:—The heart which is of the shape of a lotus bud hangs with its apex downward, folding itself up during sleep and expanding with the return of waking or consciousness. 32.

Sleep and its virtues:—Sleep is the illusive energy of God (lit.—the all-pervading deity) and naturally has its sway over all created beings. The kind of sleep which sets in when the sensation-carrying channels (Snāyu) of the body are choked by Sleshma, which abounds in the quality of Tamas, is known as **Tāmasi-nidrā**. It is this sleep which produces unconsciousness at the time of dissolution or death. A man of **Tāmasika-temperament** sleeps both in the day and night; one of the **Rājasika-temperament** sleeps either in the day or in the night; while sleep never visits the



eyelids of a man of **Sáttvika-temperament** before midnight. Persons with enfeebled Kapham and aggravated Váyu, or suffering from bodily and mental troubles, get little sleep, and if at all, their sleep is of the Vaikárika or delirious type (*i.e.* much disturbed)*. 33-34.

Memorable Verses :—O Suśruta ! the heart is said to be the primary seat of consciousness (**Chetaná**) in the animated beings. Sleep overcomes a man whenever the heart is enveloped in the illusive effects of Tamas. Sleep is the offspring of Tamas and it is the quality of Sattvam that brings on awakening. This is the fundamental law of Nature. The self-conscious individuality (**Self**), ensconced in the material frame of man which is composed of the five material elements, recollects through the agency of the mind (**Manah**), which abounds in the quality of Rajas, the renaissance of his by-gone existences, and wakens up in his psychic plane the pictures of good or evil deeds done by him therein. Dreams are but the embodiment of these recollections. The self or **Jivatmá**, though he sleeps not himself, is said to be sleeping, whenever the sense organs are overpowered by the illusive energy of Tamas. 35.

Day sleep is forbidden in all seasons of the year, except in summer and in the case of infants, old men, and persons enfeebled by sexual excesses, or in Kshata-kshina diseases and in case of habitual tipplers. A sleep in the day may be enjoyed after the fatigue of a long journey, riding, or physical labour, or on an empty stomach. It may be allowed as well to men suffering from the loss of fat, Kapham or blood, to those of

* Such persons may get sleep only, when being tired and exhausted they cease to think of their affairs.

C f. Charaka :—When the active self of a person, tired in body and mind, loses touch with his worldly affairs, sleep comes to him.

scanty perspiration, or of dry or parched constitution ; and also to those who have been suffering from indigestion and who may sleep for a Muhurta (48 minutes) in the day time. Those who have kept late hours in the night may sleep in the day for half the time they have watched in the night (and no more). Day sleep is the outcome of perverted nature and all the Doshas of the body are aggravated by a sleep in the day, bringing on many a troublesome complaints such as cough, asthma, catarrh, heaviness of the body, aching or lassitude in the limbs, fever, loss of appetite etc. On the other hand, the keeping of late hours in the night develops symptoms (Upadrava) which are peculiar to the deranged Váyu and Pittam. 36.

Memorable Verses:—Hence, one should not sleep in the day, nor keep late hours. Having known both these acts to be injurious, the wise should observe moderation in sleep. A conformity to the preceding rule of conduct is rewarded with health, good humour, strength, healthful complexion, virility and beauty, a frame which is neither too fat nor too thin, and a long life of a hundred years). A day sleep may not prove injurious to those who are habituated to it and conversely keeping late hours at night may not tell upon the health of those to whom it is customary. 37-39.

An aggravated condition of the bodily Váyu or Pittam, an aggrieved state of the mind, loss of vital fluid, and a hurt or an injury may bring on insomnia, the remedy being the adoption of measures antagonistic to those which destroy sleep. The following measures are useful in cases of sleeplessness—such as anointing the body, rubbing of oil on the head, soft massages of the body (with cleansing paste) and shampooing ; a diet consisting of cakes and pastry made up of Śáli-rice and



wheat prepared with sugar or other derivatives of sugar-cane, sweet or soothing articles with milk or meat juice or flesh of animals of the Biskira or Vileśaya class, and eating of grapes, sugar and sugar-cane at night, are beneficial (in such cases); so also a soft and pleasant bed, and easy and convenient seats and means of locomotion. Hence, a wise physician should advise those and similar other measures to allay insomnia. 40-41.

Excessive sleep should be remedied by emetics, Sansódhana measures, fastings, bleeding, and works which tend to disturb the mental equanimity of man. Keeping up at night is beneficial to persons afflicted with obesity, poison or the deranged Kapham; so also a nap in the day is beneficial to people troubled with hiccough, colic pain, dysentery, indigestion, or thirst. 42-43.

Somnolence or Drowsiness etc. :—In this kind of light sleep, or in the preliminary stage of sleep, the sense organs are overpowered and remain only partially cognisant of their respective objects and all (subjective and objective) symptoms of a sleepy person such as, yawning, sense off atigue and heaviness of the limbs, present themselves in succession; these are the special features of **Tandra**. One (prolonged) inhaling of the air through a widely open mouth and subsequent exhaling with the contraction of the limbs and tearful eyes are (all together) called **Jrimbhā** or yawning.

A sense of fatigue without any physical labour which comes upon a person unaccompanied by hurried respiration is called **Klama**. It obstructs the proper functions of the senses as also the workings of the active organs.* An inordinate love of pleasure and a great aversion to pain, attended with an apathy to all sorts of

* Hand, leg, anus, and generative organ etc.

work even with the capacity of carrying them through is called **Ālasyam** (laziness). Nausea, without vomiting of ingested food, attended with salivation and formation of sputum, and cardiac distress are the symptoms of **Utklesham**. A sweet taste in the mouth, drowsiness, a beating pain in the heart, dizziness, and non-relish for food are the signs of **Glāui** (languor). A feeling as if the whole body were wrapped in a wet sheet, accompanied by an extreme heaviness of the heart, is called **Gauravam**. 44-50.

Loss of consciousness (**Murchchā**) is due to an excess of the deranged Pittam and to the quality of the Tamas; vertigo (**Bhrama**) is due to an aggravated state of the Vāyu, Pittam, and to the quality of the Rajas; drowsiness (**Tandra**) is due to a similar condition of the Vāyu, Kapham and to the quality of the Tamas; while sleep (**Nidra**) is produced by the predominance of Kapham and to the quality of the Tamas in the organism. 51.

The growth of a foetus in the womb is effected by the serum (Rasa) prepared out of the food (assimilated by its mother) incarcerated by the Vāyu in the internal passage of its body. 52.

Memorable Verses :—Be it clearly understood that there exists fire or heat (Jyoti) in the umbilical region of the foetus which is fanned by its bodily Vāyu and thus contributes to the growth of its body. The same Vāyu in combination with the heat (thus generated), expands the upward, downward, and lateral channels (in the body of the embryo) and thus leads to the growth of the foetus. The eyes (**Dristi**—aperture of sight) and the hair-follicles of a man do not

* In the text we find the word "Indriya" which refers to both Jñānendriya (sensory functions) and Karmendriya (motor functions) of the body.



participate at all (in the general expansion of the body). This is a law of nature, and is the opinion of Dhanvantari. On the other hand the growth of hair and finger nails continue even when the body enters the stage of decay. This also is a law of nature. 53-56.

The Temperaments :—The temperaments (Prakriti) of persons may be of seven different types, according as the deranged Doshas of the body are involved therein, either severally, or in combination of two or of all the three together. The temperament (Prakriti) of a man is determined by the preponderance of the particular Doshas at the time of his generation (actual combination of the semen and ovum) and is marked by that preponderant Dosha. The characteristics of the different Prakritis are now described. 57-58.

Vátaja-Temperament :—A man of *Vátika-temperament* is wakeful, averse to bathing and cold contact, unshapely, thievish, vain, dishonest and fond of music; the soles of his feet, and the palms of his hands are much fissured; has often a rough and grisly beard and moustache, finger nails and hairs in him; he is hot-tempered and is given to biting his finger nails and grinding his teeth (when asleep). Morally he is impulsive, unsteady in his friendship, ungrateful, lean, and rough; his body is marked with a large number of prominent veins (Dhamani); he is incoherent in his habit and vacillating in his temper. He is a fast walker and dreams of scaling the skies in his sleep. His eyes are always moving. His mind is never steady. He makes few friends, is capable of accumulating very little money and talks incoherently. The traits of his character etc. seem to resemble those of a goat, jackal, hare, mouse, camel, dog, vulture, crow, and of an ass. 59-60.

Pittvaja-Temperament :—A man of *Pittvaja temperament* perspires copiously emitting a fetid smell. His limbs are loosely shaped and yellowish in colour. The finger nails, eyes, palate, tongue, lips, soles and palms of such a person are copper-coloured. He looks ugly with wrinkles, baldness and grey hair; he eats much, is averse to warmth and irritable in temper, though he cools down very soon. He is a man of middling strength and lives up to middle age. He is intelligent and possesses a good retentive memory and loves to monopolise the conversation (by pulling down any speaker that may be present). He is vigorous and is simply irresistible in battle. He dreams in his sleep of such things as meteors, lightning-flashes, fire, Nágeshvara, Palaśa or Karnikára plants. He is never overpowered with fear nor bends before a powerful antagonist; he protects the suppliant and is very often afflicted with suppuration in the cavity of the mouth. The traits of his character resemble those of a serpent, an owl, a Gandharba (heavenly musician), Yaksha, cat, monkey, tiger, bear, and of a mongoose. 61-64.

Kaphaja-Temperament :—The complexion of a man of *S'leshmá* temperament resembles either the colour of a blade of grass, blue lotus, polished sword, wet Arishta, or that of the stem of the Śara grass. He is comely in appearance, fond of sweet tastes, grateful, self-controlled, forbearing, unselfish and strong; he does not hastily form any opinion, and is fast in his enmity. His eyes are white; his hair curly and raven black. He is prosperous in life. His voice resembles the rumblings of a rain-cloud, the roar of a lion, or the sound of a Mridanga. He dreams in his sleep of large lakes or pools decked with myriads of full blown lotus flowers, swans and Chakravákas. His eyes are slightly