



red towards the corners, the limbs are proportionate and symmetrically developed with a cool effulgence radiating from them. He is possessed of the qualities of the Sāttvika stamp, capable of sustaining pain and fatigue and respectful towards his superiors. He possesses faith in the Śāstras and is unflinching and unchanging in his friendship; he suffers no vicissitudes of fortune, makes large gifts after long deliberation, is true to his word and always obedient to his preceptors. The traits of his character resemble those of Brahma, Rudra, Indra, Varuna, a lion, horse, an elephant, cow, bull, an eagle, swan and of the lower animals. 65-68.

A combination of two different temperaments should be called a double temperament or a **Dvandaja** one; and one of all the three temperaments in a person should be stated as a **Sānnipātika** one. 69.

The temperament of a man is never altered, nor does it suffer any deterioration or abatement. A change, abatement or deterioration in any particular case should be regarded as the harbinger of death. As a worm, bred in poison, is not troubled with it, so the temperament of a person however painful to others does no inconvenience to himself. Several authorities hold that the temperaments of persons have their origin in the material elements of the body and accordingly they classify them as the **Vātika Prakriti**, the **Taijasa Prakriti**, and the **Āpya** (watery) **Prakriti**, the characteristic traits of which respectively correspond to the first three temperaments described above. 70—71.

A man of the **Pārthiva** temperament is large in his stature, and is firm, strong and muscular in his limbs. A man of the **Nabhasa** temperament is pious and long-lived, has large aural cavities. The mental temperaments are classified according to their qualities. 72.



Sáttvika Features :—The features of a **Brahma-kāya** person are cleanliness of person and conduct, belief in the existence of God, a constant reader of the Vedas, a worship and reverence of elders and preceptors, hospitality and celebration of religious sacrifices. Those of a **Mahendra-kāya** person are valour, command, constant discussion of the Śástras, maintenance of servants and dependents and magnanimity. The features of a **Karuna-kāya** person are a liking for exposure to cold, forbearance, a brown hue of the pupils, golden colour of the hair and sweet speech. The features of a **Kouvera-kāya** person are, arbitration of disputes, capacity of bearing hardships, earning and accumulation of wealth, and capacity of propagation or fertility. The features of a **Gandharva-kāya** person are love of garlands and perfumes, fondness of songs and music, and love making. The features of a **Yamya-Sáttva** person are sense of duty, promptness, firmness of action, courage, memory, purity, and absence of anger, illusion, fear and malice. The features of a **Rishi-Sáttva** man are divine contemplation, observance of vows, complete sexual abstinence, performance of Homas, celebration of religious sacrifices, knowledge, wisdom and cultivation of divine or spiritual science. These seven types of men should be considered as belonging to the Sáttvika group (of Sáttvika mental temperament). Now hear me describe the features of men of Rájasika stamp (of mind). 73.

Rájasika Features :—**Asura-Sáttva** men are affluent in circumstances, dreadful, valorous, irascible, jealous of other men's excellence, gluttonous and fond of eating alone without sharing with any one else. A **Sarpa-Sáttva** man is irritable, laborious, cowardly, angry, double-dealing, and hasty in eating and sexual



intercourse. A **Śakuna-Sattva** man is gluttonous, intemperate in sexual matters, irritable and fickle. A **Rākshasa-Sattva** man is solitary in his habits, fierce, jealous of others excellence, externally pious, extremely vain and ignorant. The characteristics of a **Paisācha-Sattva** man are eating food partaken of by another, irritability of temper, rashness, shamelessness, and covetousness of female possessions. Those of **Preta-Sattva** man are utter want of knowledge as regards duty, laziness, miserableness, envy, covetousness, niggardliness. These six belong to the Rājasika cast of mind. Now hear me describe the characteristic traits of men of the Tāmasika temperaments. 74.

Tāmasika Features:—The features of a **Pāsava-Sattva** man are perverseness of intellect, parsimoniousness, frequent sexual dreams and incapacity of ascertaining or discerning anything. The features of **Matsya-Sattva** man are unsteadiness, stupidity, cowardice, fond of intermissive quarrel and oppression and a longing for water. The features of a **Vanapati-Sattva** man are fondness of staying at the same place, constant eating and absence of truthfulness, piety, riches and enjoyment. Thus the three types of Tāmasika temperament have been described. A physician should take in hand a patient with an eye towards these mental traits etc. A physician should coolly deliberate upon the different types of temperament described herein and their characteristic features. 75-76.

Thus ends the fourth Chapter of the S'ārira Sthānam in the S'usruta Samhitā which treats of foetal development etc.



CHAPTER V.

Now we shall discourse on the Śáriram which treats of the anatomy of the human body (**Śárirá-Śankhyá-Vyáakaranam**). 1.

Definition of Garbha and Śárirá :—

The combined semen and ovum (Śukra and Śonita) in the womb, mixed with (the eight categories known as) the Prakriti and (her sixteen modifications known as) Vikára, and ridden in by the **Átmá** (self-conscious self), is called the **foetus**. There is consciousness in the embryo. The **Váyu** (or the vital force) divides it into Dosha, Dhátu, Mala, etc., limbs, and organs, etc. The **Teja** (or the heat latent in the fecundated matter) gives rise to the metabolism of the tissues ; the **Ápa** (water) keeps it in a liquid state ; the **Kshiti** (earth) is embodied in the shape of its species ; and the **Ákáśa** (ether) contributes to its growth and development. A fully developed foetus with all its parts, such as the hands, feet, tongue, nose, ears, buttocks etc. and the sense-organs, is called **Śáriram** or body. The body is composed of six main parts, namely, the four extremities (upper and lower), the trunk or middle body, and the head. 2.

Different members of the body :—Now we shall describe the Pratyangas or members of the body. The head, the belly (Epigastrium), the back, the navel (umbilical region), the forehead, the nose, the chin, the bladder, and the throat (neck), occur singly ; the ears, the eyes, the nostrils, the eye-brows, the temples, the shoulders, the cheek, the armpits, the breasts, the testes, the sides, the buttocks, the arms, the thighs, and the knee-joints, etc., occur in pairs. The fingers and



toes which number twenty in all, and the interior channels (Śrōtas) of the body, to be presently described, are likewise included within the Pratyangas. These are the different Pratyangas or members. 3.

Enumeration of the different limbs and members of the body :—

The different layers of the skin, the Kalás, the Dhátus (root principles, such as blood, chyle, etc.), the Mala (excrements), the Doshas (morbific principles, such as the Váyu, Pittam, or Kapham), the spleen, the liver, the lungs, the colon and cæcum (Unduka), the heart, the cavities or viscera (Ásáyas), the intestines (Antras), the Vrikkou (Kidneys) the Śrōtas (internal passages or ducts), the Kandará (nerve trunks), the Jálas (membranes), the Kurchas,* the Rajjus (tendons) the Sevanis (sutures), the Sanghátas (facets), the Simanta, the bones, the joints, the Snáyu (ligament), the Peśi (muscles), the Marmas (vital parts, such as anastomosis of veins and arteries, etc.), the Śíra (veins), the Dhamani (arteries), and the Yogaváhini Śrōtas†, constitute what is collectively called the organism. 4.

Their number :—The layers of skin (Tvaka) number seven in all. There are seven connective tissues or fascia (Kalás). The cavities or viscera (Ásayas) are seven in all. The root principles (Dhātu) of the body are seven in number. There are seven hundred Śírá (veins), five hundred Peśi (muscles), nine hundred Snáyu (ligaments), three hundred bones, two hundred and ten Sandhi (joints), one hundred and seven Marmas (vital parts), twenty-four Dhamanis (arteries etc.), three Doshas (morbific principle—such as the Váyu, Pittam,

* Meetings of muscles, ligaments, veins, nerves and bones as at the annular ligament.

† Those, that are in connection with the Dhamani.



to the **Sushira** type. The ligaments of the chest, back, sides and head are of the **Prithu** type. 34—35.

As a boat made of planks and timber fastened together by means of a large number of bindings is enabled to float on the water and to carry cargo ; so the human frame being bound and fastened at the **Sandhis** or joints by a large number of ligaments (**Snáyu**) is enabled to bear pressure. An injury to, or diseases of, the bones, veins, joints or muscles are not so detrimental to the system as is the case if the **Snáyus** are affected in any way. Only the physician, who is acquainted with the internal and external ligaments (**Snáyus**) of the body, is qualified to extract a hidden and imbedded **Śalyam** (extraneous matter etc.) from any part of the body. 36.

The Muscles (Peśis) :—The muscles (**Peśis**) number five hundred in all, of which four hundred are in the four extremities ; Sixty-six* in the trunk (**Koshtha**) and thirty-four in the region above the clavicles. 37.

Muscles in the Extremities :—There are three muscles in each of the toes, thus making fifteen in the toes of one leg ; ten in the anterior part of the foot and the same number (ten) attached to the **Kurchcha** ; ten in the sole and the ankle-bone (**Gulpha**,—**malledi**) ; twenty in the region between the **Gulpha** and the knee-joint ; five in the knee-joint (**Jánu**) ; twenty in the thigh (**Uru**) ; and ten in the groin (**Vankshana**) ; thus making one hundred muscles in all in each leg. The same number is found in each of the other three extremities ; (thus making four hundred in all). 38.

Muscles in the Koshttha :—(Of the sixty-six muscles in the trunk), three are in the region of the

* **Gayádása** reads sixty in the trunks and forty above the clavicles.



anus (Pāyu); one in the penis; one in the perineum (Sevani); two in the scrotum; five in each of the haunches (Sphik); two in the top or head of the bladder; five in the abdomen (Udara); one about the umbilicus; five along each side (of the spinal column), on the upper part of the back (making ten in all); six in the sides; ten in the chest; seven around the armpits and shoulders (Akshaka-Ansa); two in the region of heart and stomach (Āmāsāya); and six in the region of the liver, spleen and colon (Unduka). 39.

Muscles of the Head and Neck :—(Of the thirty-four muscles found in this region), four are in the throat (Grivā); eight in the two jaw-bones (Hanu); one each in the regions of the throat (Kākalaka and Gala); two in the palate; one in the tongue; two in the lips: two in the nose; two in the eyes; four in the cheeks; two in the ears; four in the forehead; and one in the head. Thus the positions and distributions of the five hundred muscles (Peśis) have been described. 40.

Metrical Text :—The ligaments, veins, bones and joints etc., of a human body, derive their strength from the fact of their being supported by or covered over by the muscles. 41.

Extra Muscles in Women :—Females have twenty extra muscles; ten muscles are to be found about the two breasts, five in each, which (muscles) attain their full growth during puberty; four muscles are present about the parturient passage; and of these (four) two are about the external and two in the internal orifices (of the vagina); three about the region of the os, and three along the passages of the ovum and sperm. The Garbhāsāya or uterus is situated in the space bounded by the Pittāsāya (small intestine) and Pakvāsāya



(large intestine) and the foetus lies in this during the period of gestation.* 42-43.

According to their position in the system, these muscles are found to be thick, slender, small, expanded, circular, short, long, hard, soft, smooth or rough. The muscles cover the veins, ligaments, bones and joints; hence their shape and size are determined by the exigencies (organic structures) of their positions. 44.

Memorable Verses :—The muscles which are found in the penis and scrotum of a man as described before correspond to the covering of the uterus in the case of a woman owing to the absence of those organs in her body. The positions and classifications of the veins, channels, Marmas and arteries will be dealt with in a separate chapter. 45-46.

The vagina of a woman resembles the navel of a conch-shell in shape and is possessed of three involuted turns (Ávartas) like the interior of mollusc. The uterus (Garbhás'aya—foetal bed) is situated at the third posterior involuted turn. The shape of the uterus resembles the mouth of a Rohit-fish (narrow at the mouth and expanded in the upper end). The foetus lies in a crouched or doubled up posture in the uterus and thus naturally at the time of parturition its head is presented at the entrance to the vagina. 47-48.

Superiority of Śalya-Tantram :—The different parts or members of the body as mentioned before including even the skin cannot be correctly described by any one who is not versed in **Anatomy**. Hence, any one desirous of acquiring a thorough knowledge of anatomy should prepare a dead body and carefully observe (by dissecting it) and examine

* If we read Mutrás'aya (bladder) in place of Pittás'aya it explains the anatomy better.—Ed.



its different parts. For a thorough knowledge can only be acquired by comparing the accounts given in the Śāstras (books on the subject) by direct personal observation. 49.

Mode of dissection :—A dead body selected for this purpose should not be wanting in any of its parts, should not be a person who had lived up to a hundred years (i. e. too old age) or of one who died from any protracted disease or of poison. The excrementa should be first removed from the entrails and the body should be left to decompose in the water of a solitary and still pool, and securely placed in a cage (so that it may not be eaten away by fish nor drift away), after having covered it entirely with the outer sheaths of *Munja* grass, *Kus'a* grass, hemp or with rope etc. After seven days the body would be thoroughly decomposed, when the observer should slowly scrape off the decomposed skin etc. with a whisk made of grass-roots, hair, *Kus'a* blade or with a strip of split bamboo and carefully observe with his own eyes all the various different organs, external and internal, beginning with the skin as described before. 50—56.

Memorable Verses :—The **Self**, the occult or invisible Lord of the body cannot be detected except with the psychic eye or with that of the mind. He, who has observed the internal mechanism of the human body and is well read in the works bearing on these subjects and has thus all his doubts expelled from his mind is alone qualified in the science of *Āyurveda* and has a rightful claim to practise the art of healing. 57.

Thus ends the fifth Chapter of the *S'ārīra-sthānam* in the *Sus'ruta Samhitā* which treats of the anatomy of the human body.



CHAPTER VI.

Now we shall discourse on the Śáriram which specifically treats of the Marmas* or vital parts of the body (**Pratyeka-marma-nirdeśa Śáriram.**) 1.

Classification of Marmas:—There are one hundred and seven Marmas (in the human organism), which may be divided into five classes, such as the Mánsa-Marmas, Śirá-Marmas, Snáyu-Marmas, Asthi-Marmas and the Sandhi-Marmas. Indeed there are no other Marmas (vulnerable or vital parts) to be found in the body than the preceding ones. 2.

Their different numbers:—There are eleven Mánsa-Marmas (vulnerable muscle-joints); forty-one Śirá-Marmas (similar veins, anastomosis); twenty-seven Snáyu-Marmas (vital ligament-unions); eight Asthi-Marmas (bone-unions) and twenty Sandhi-Marmas (vulnerable joints). 3.

Their Locations:—Of these, eleven are in one leg, thus making twenty-two in the two lower extremities. The same number counts in the two hands. There are twelve Marmas in the regions of the chest and the abdomen (Udara); fourteen in the back; and thirty-seven in the region of the neck (Grivá) and above it. 4.

Names and distributions of Marmas:
—The Marmas which are situated in each leg are known as Kshipra, Tala-Hridaya, Kurchcha, Kurchcha-Śírah, Gulpha, Indravasti, Jánu, Ani, Urvi, Lohitáksha and Vitapa. The twelve Marmas which are situated in the

* Places where veins, arteries, ligaments, joints and muscles unite and an injury to which proves generally fatal.

thorax and the abdomen (Udara) are Guda (anus), Vasti (bladder), Nábhi (umbilicus), Hridaya (heart), Stana-mula (the roots of two breasts), the Stana-Rohita, (muscles of the breasts), the two Apaláps and the two Apastambhas. The fourteen Marmas to be found in the back are the Katika-tarunas (Taruna-bones of the waist), the two Kukundaras, the two Nitamvas (hips), Pársva-Sandhis (the two side-joints), the two Vrihatis, the two Ansa-phalakas (shoulder-blades) and the two Ansas (shoulders). The eleven Marmas to be found in an arm are known as the Kshipra, Tala-Hridaya, Kurchcha, Kurchcha-Śirah, Manivandha, Indravasti, Kurpara, Ani, Urvi, Lohitáksha and Kakshadhara. What is said of the one arm holds good of the other. The Marmas situated above the clavicle regions are known as the four Dhamanis, the eight Mátrikás, the two Krikátikás, the two Vidhuras, the two Phanas, the two Apángas, the two Ávartas, the two Utkshepas, the two Śankhas, one Sthapani five Simantas, four Śringátakas and one Adhipati. 5—9.

The different heads of Marmas :—Of the aforesaid Marmas, those known as the Tala-Hridaya, Indravasti, Guda and Stana-rohita, are **Mánsa-Marmas**. Those known as Nila-dhamani, Mátriká, Śringátaka, Apánga, Sthapani, Phana, Stana-mula, Apalápa, Apastambha, Hridaya, Nábhi, Pársva-Sandhi, Vrihati, Lohitáksha and Urvi, are **Śirá-Marmas**. Those known as the Ani, Vitapa, Kakshadhara, Kurchcha, Kurchcha-Śirah, Vasti, Kshipra, Ansas, (shoulders), Vidhura and Utkshepa, are **Snáyu-Marmas**. Those known as the Katika-taruna, Nitamva, Ansa-phalaka, Śankha, are **Asthi-Marmas**. The Jánu, the Kurpara, the Simanta, the Adhipati, the Gulpha, the Manivandha, the Kukundara, the Ávarta and the Krikátiká are **Sandhi-Marmas**. 10—14.



Qualitative classes :—Again these Marmas (vital unions of the body) are under five distinct heads, namely, Sadya-Pránahara, (fatal within twenty-four hours), Kálántara-Pránahara, (fatal within a fortnight or a month), Visályaghna (fatal as soon as a dart or any other imbedded foreign matter is extracted therefrom), Vaikalyakara, (maiming or deforming) and Rujákar (painful) [according as an injury respectively produces the aforesaid effects]. Of these, nineteen Marmas belong to the Sadya-Pránahara group; thirty-three to the Kálántara-Pránahara group; three to the Visályaghna group; forty-four to the Vaikalyakara group; and eight to the Rujákara group. 15.

Memorable Verses :—To the Sadya-Pránahara group (fatal in the course of a day if anyway hurt) belong the four Śringátakas, one Adhipati, the two Śankhas, the eight Kantha-Śírás, the Guda, the Hridaya, the Vasti and the Nábhi. To the Kálántara-Pránahara group (fatal later on, if any way hurt) belong the eight Vaksha-Marmas, the five Simantas, the four Tala-Marmas, the four Kshipra-Marmas, the four Indra-vastis, the two Katika-tarunas, the two Pársva-Sandhis, the two Vrihatis, and the two Nitamvas. To the Visályaghna class belong the two Utkshepas and the one Sthapani. To the Vaikalyakara (deforming) group belong the Marmas, known as the four Lohitákshas, the four Anis, the two Jánus, the four Urvis, the four Kurchchas, the two Vitapas, the two Kurparas, the two Kukundaras, the two Kakshadharas, the two Vidhuras, the two Krikátikás, the two Ansas (shoulder), the two Ansa-phalakas, (shoulder-blades), the two Apángas (tips of eyes), the two Níals, the two Manyás, the two Phanas and the two Ávartas. A learned physician should know that the two Gulphas,



the two Mani-vandhas and the four Kurchcha-Śirah (of the hands and legs) belong to the **Rujākara** group (painful if hurt). A piercing of the Kshipra-Marma ends in an instantaneous death; or death may follow at a later time. 16-21.

Firm unions of Mānsa (muscles), Śirā (veins), Snāyu (ligaments), bones or bone-joints are called Marmas (or vital parts of the body) which naturally and specifically form the seats of life (**Prāna**), and hence a hurt to any one of the Marmas invariably produces such symptoms as arise from the hurt of a certain Marma.* 22.

The Marmas belonging to the Sadya-Prānahara group are possessed of fiery virtues (thermogenetic); as fiery virtues are easily enfeebled, so they prove fatal to life (in the event of being any way hurt); while those belonging to the Kālántara-Prānahara group are fiery and lunar (cool) in their properties. And as the fiery virtues are enfeebled easily and the cooling virtues take a considerable time in being so, the Marmas of this group prove fatal in the long run (in the event of being any way hurt, if not instantaneously like the preceding ones). The Viśalyaghna Marmas are possessed of Vātaja properties (that is, they arrest the escape of the vital Vāyu); so long as the dart does not allow the Vāyu to escape from their injured interior, the life prolongs; but as soon as the dart is extricated, the Vāyu escapes from the inside of the hurt and necessarily proves fatal. The Vaikalyakaras are possessed of Saumya (lunar properties) and they retain the vital fluid owing to their steady and cooling virtues, and hence tend only to deform the organism

* Some are of opinion that hallucination, delirium, death, stupor and coma as described in the Sutrast ānam are the results of injuries to the Mar as.

in the event of their being hurt, instead of bringing on death. The Rujākara Marmas of fiery and Vátaja properties become extremely painful inasmuch as both of them are pain-generating in their properties. Others, on the contrary, hold the pain to be the result of the properties of the five material components of the body (Páncha-bhautika). 23.

Different Opinions on the Marmas:—

Some assert that Marmas, which are the firm union of the five bodily factors (of veins, ligaments, muscles, bones and joints), belong to the first group (Sadya-Pránahara); that those, which form the junction of four such, or in which there is one in smaller quantity, will prove fatal in the long run, in the event of their being hurt or injured (Kálántara-Pránahara).^{*} Those, which are the junction of three such factors, belong to the Vis'alya-Pránahara[†] group; those of the two belong to the Vaikalyakara[‡]

^{*} The Marmas, such as Stana-mula, Apalápa, Apastambha, Simanta, Katika-Taruna, Pársva-Sandhi, Vrihati, and Nitamva belonging to the Kálántara-máraka group, are devoid of Mánasa (muscles); and the 'Marmas' known as Stanarohita, Talahridaya, Kshipra, and Indravasti, belonging to the same class, are devoid of Asthi (bones).

[†] The Ukshepa marma, belonging to the Vis'alya-pránahara group, is devoid of Mánasa (muscles) and Sandhi (joint).

[‡] The Sthapani-Marma, belonging to the Vaikalyakara class, is devoid of Mánasa (muscle), S'irá and Snáyu; the Lohitáksha-marma (of the same group) is devoid of Snáyu, Sandhi and Asthi (bones); the Jānu-marma (of the same group) is devoid of Mánasa, S'irá and Snáyu; the Urvi-marma (of the said group) is devoid of Asthi, Mánasa and Snáyu; the Vitapa-marma (of the same class) is devoid of Mánasa, Sirá and Asthi; the Kurpara-marma (of the same class) is devoid of Mánasa, S'irá, and Snáyu; the Kukundara-marma (of the same class) is devoid of Mánasa, S'irá and Sandhi; the Kakshadhara-marma (of the same class) is devoid of S'irá, Asthi, and Sandhi; the Vidhura-marma (of the said group) is devoid of Mánasa, Sirá and Sandhi; the Krikatika-marma is devoid of Mánasa, S'irá, and Sandhi; the Ansa-marma (of the same group) is devoid of Mánasa, Snáyu and Sandhi; the Ansa-phalaka-marma

group; and those in which only one of them exists belongs to the last or pain-generating type (Rujákara)*.

But the fore going theory is not a sound one, inasmuch as blood is found to exude from an injured joint which would be an impossibility in the absence of any vein, ligament (Snáyu) and muscle being intimately connected with it. Hence every Marma should be understood as a junction or meeting place of the five organic principles of ligaments, veins, muscles, bones and joints. 24-25.

Metrical text :—This is further corroborated by the fact that the four classes of S'irá or vessels (which respectively carry the Váyu, Pitta, Kapha and the blood) are found to enter into the Marmas for the purpose of keeping or maintaining the moisture of the local ligaments (Snáyu), bones, muscles and joints and thus sustain the organism.† The Váyu, aggravated by an injury to a Marma, blocks up (those four classes of vessels) in their entire course throughout the organism and gives rise to great pain which extends all over the body. All the internal mechanism of a man (of which a Marma has been pierced into with a shaft or with any other piercing matter) becomes extremely painful, and seems as if it were being constantly shaken or jerked, and symptoms of syncope are found to set in. Hence a careful examination of the affected Marma should

(of the said group) is devoid of Mânsa, Snáyu and Sandhi; the Nilá, Manyá and Phana Marmas (of the same group) are devoid of Mânsa, Sandhi and Asthi; the Ávarta-marma is devoid of S'irá, Snáyu and Mânsa; the Apánga-marma (of the said class) is devoid of Mânsa, Snáyu and Sandhi.

* The Gulpha, Manibandha, and Kurchcha-s'ira Marmas, belonging to the Rujákara group, are devoid of Mânsa, S'irá, Snáyu and Asthi, *i.e.* Sandhi alone is present in these.

† Hence the piercing of a bone is attended with bleeding.

precede all the foregoing acts of extricating a Salya from its inside. From that similar aggravated conditions and actions of the Pitta and the Kapha should be presumed in the event of a Marma being any way injured or pierced into. 26—29.

A Marma of the Sadyah-Pránahara type being perforated at its edge brings on death at a later time (within seven days), whereas a deformity of the organ follows from the piercing of a Kálántara-Máraka* Marma at the side (instead of in the centre). Similarly, an excruciating pain and distressful after-effects mark a similar perforation of a Marma of the Vis'alyaghna† group. And a Marma of the Rujákara‡ class produces an excruciating pain (instead of a sharp one) in the event of its being pierced at the fringe. 30.

An injured Marma of the Sadyah-Pránahara type terminates in death within seven days of the injury, while one of the Kálántara type, within a fortnight or a month from the date of hurt (according to circumstances). A case of injured Kshipra-Marma seldom proves fatal before that time (seven days). An injured Marma of the Vis'alyaghna or Vaikalyakara group may prove fatal in the event of its being severely injured. 31.

Marmas of the Extremities :—Now we shall describe the situation of every Marma. The

* If any of the Marmas of the Kálántara-Pránahara group be deeply perforated, then this perforation is sure to bring on death within a day (*i.e.* it will act like a slightly injured Marma of the Sadyah-Pránahara group).

† Any Marma of the Vis'alyaghna-group, being deeply perforated, brings on death within seven days (*i.e.* it will behave like a slightly injured Marma of the Kálántara-Pránahara class).

‡ Any Marma of the Rujákara class, being deeply perforated (injured), is sure to bring excruciating pain etc., (*i.e.* it will act like a slightly injured Marma of the Vis'alyaghna group).



Marma, known as the **Kshipra***, is situated in the region between the first and the second toes (Tarsal articulation), which, being injured or pierced, brings on death from convulsions. The Marma, known as the **Tala-Hridaya†**, is situated in the middle of the sole of the foot in a straight line drawn from the root of the middle toe. An injury to this Marma gives rise to extreme pain which ends in death. The Marma, known as the **Kurchcha‡**, is situated two fingers' width above from the Kshipra one on each side of the foot. An injury to this Marma results in shivering and bending in of the foot. The Marma called **Kurchcha-Sirah§** is situated under the ankle-joints, one on each side of the foot (Gulpha-Sandhi); an injury to it gives rise to pain and swelling of the affected part. A perforation of the **Gulpha-Marma||**, which is situated at the junction of the foot and the calf, results in pain, paralysis and maimedness of the affected leg. 32-37.

An injury to the Marma which is situated in the middle muscle of the calf to the distance of between twelve and thirteen fingers' width from the ankle, and known as the **Indravasti-Marma,¶** results in excessive hæmorrhage which ends in death. 38.

* It is a Snáyu-Marma (ligament) to the width of half a finger, and belongs to the Kálántara group.

† It is a Mânsa-Marma to the width of half a finger and belongs to the Kálántara group.

‡ It is a Snáyu-Marma to the length of four fingers' width, and belongs to the Vaikalyakara group.

§ It is a Snáyu-Marma, one finger in length and belongs to the Vaikalyakara group.

|| It is a Sandhi-Marma, to the length of two fingers', and belongs to the Vaikalyakara group.

¶ Indravasti measures two fingers in length according to Bhoja and

An injury to or piercing of the **Jānu-Marma**,* situated at the union of the thigh and the knee, results in lameness of the patient. 39.

A piercing of the **Āni-Marma**,† situated on both the sides above three fingers' width from the Jānu (knee-joint), brings on swelling and paralysis (numbness) of the leg. 40.

A perforation of the **Urvi-Marma**,‡ situated in the middle of the Uru (thigh), results in the atrophy of the leg, owing to the incidental hæmorrhage. An injury to the **Lohitaksha-Marma**,|| situated respectively a little above and below the Urvi-Marma and the Vankshana (groin-joint), and placed near the thigh, is attended with excessive hæmorrhage and causes paralysis (of the leg). 41-42.

An injury to the **Vitapa-Marma**,¶ situated between the Scrotum and the Vankshana (inguinal region), brings on loss of manhood or scantiness of semen. Thus the eleven **Sakthi-Marmas** of one leg have been described ; those in the other being of an identical nature with the preceding ones. The Marmas in the hands are almost identical with those of the legs, with the exception that **Manivandha**, **Kurpara** and **Kakshadhara** Marmas

Gayādāsa, though half a finger in width according to others. It is a Mānsa-Marma and belongs to the Kālāntara group.

* It is a joint-Marma, three fingers in length and belongs to the Vaikalyakara group.

† It is a ligament-Marma, half a finger in length, (three fingers according to Gayādāsa) and is of the Vaikalyakara class.

‡ It is a S'irā-Marma, half a finger in length and of the Vaikalyakara group.

|| It is a S'irā-Marma, half a finger in length and of the Vaikalyakara group.

¶ It is a Snāyu-Marma to the length of one finger and of the Vaikalyakara group.



occur in the place of the Gulpha, Jánu and Vitapa Marmas respectively. As the Vitapa-Marma is situated between the scrotum and the Vankshana (inguinal region), so the Kakshadhara-Marma is situated between the Vaksha (chest) and the Kaksha (armpit). An injury to these causes supervening symptoms. An injury to the Manivandha-Marma (wrist-marma) results specially in inoperativeness (Kuntha) of the affected hand ; an injury to the Kurpara-Marma ends in dangling (Kuni) of the hand ; and an injury to the Kakshadhara results in hemiplegia. Thus the forty-four Marmas of the upper and the lower extremities have been described. 43-46.

Marmas on the Thorax etc. :—Now we shall describe the Marmas, situated in the region of the thorax and the abdomen (trunk). A hurt to the **Guda-Marma***, which is attached to the large intestine and serves as the passage of stool and flatus, ends fatally (within twenty-four hours of the hurt). An injury to the **Vasti-Marma**† situated inside the cavity of the pelvic region and the bladder and composed of small muscles and blood (and which serves as the receptacle of urine), proves fatal within the day, except in the cases of extracting the gravel, only when the injury to the organ is short of complete perforation of both of its walls. The urine oozes out through the aperture in the case where only one of its walls has been perforated, and which may be closed and healed up with proper and judicious medical treatment. An injury to the

* It is a Mānsa-Marma to the length of four fingers' width and belongs to the Sadyo-māraka class.

† It is a ligament combination (Snáyu-marma) to the length of four fingers, belonging to the Sadyah-Pránhara class.

Nabhi-Marma,* the root of all the *S'irás* and situated between the *Ámása* (stomach) and the *Pakvása* (intestines) ends in death within the day. 47-50.

A hurt to the **Hridaya-Marma**,† which is situated in the thorax between the two breasts and above the pit of the *Ámása* and forms the seat of the qualities of *Sattva*, *Rajas* and *Tamas*, proves fatal within the day. An injury to the **Stana-mula-Marmas**,‡ situated immediately below each of the breasts and about two fingers in width fills the *Koshtha* (thorax) with deranged *Kapha*, brings on cough, difficult breathing (asthma) and proves fatal. An injury to any of the **Stana-Rohita-Marmas**,§ situated above the nipples of the breasts about two fingers in width, fills the cavity of the *Koshtha* (thorax) with blood, producing symptoms of cough and asthma, and ends fatally. An injury to the **Apalāpa-Marmas**,|| situated below the *Ansa-kuta* (balls of the shoulders) and above the sides (meeting of the different branches of the sub-clavicle veins *i.e.* *axilla*), transforms the blood of the organism into pus and proves fatal thereby. 51-54.

An injury to any of the *Vāyu*-carrying vessels, known as the **Apastambha-Marma**¶ (meeting of the bifurcated branches of the bronchi lying on both the sides

* It is a *S'irā*-Marma to the length of four fingers, belonging to the *Sadyah-Prānahara* class.

† It is a *S'irā*-Marma to the length of four fingers and of the *Sadyah-Prānahara* class.

‡ It is a *S'irā*-Marma, two fingers in length and of the *Kālántara* class.

§ It is a *Mānsa*-Marma about half a finger in length and of the *Kālántara* class, (according to *Vgabhata*, of the *Sadyo-Māraka* class).

|| It is a *S'irā*-Marma, half a finger in length, and of the *Kālántara* class.

¶ It is a *S'irā*-Marma, half a finger in length and belongs to the *Kālántara* class.



of the breast), fills the Koshtha with the deranged Vāyu (tympantites) accompanied by cough and dyspepsia, and terminates in death. Thus the twelve Marmas situated in the thorax and abdomen are described. 55-56.

Prishtha Marmas :—Now we shall discourse on the Marmas in the back (of a man). An injury to any of the **Katika-tarunas*** (sacro-iliac articulation), situated in the region of the S'roni (sacrum) on both sides of the spinal column, gives rise to an excessive hæmorrhage and consequent pallor and ends in death. A hurt to any of the **Kukundara Marmas** † (lit :—a hollow—the great sacro-sciatic notch), situated on both sides of the spinal column and in the region slightly below the waist (in the loins), results in complete anæsthesia and inoperativeness of the lower extremities. A hurt to the **Nitamva-Marmas**,‡ attached to the side above the S'roni (pelvis) and attached inside to the muscles of the waists, gives rise to Śosha (atrophia) in the lower extremities, weakness and ultimately brings on death. An injury to the **Pārsva-Sandhi-Marmas** § (cælic axes) which are situated just at the middle below the extremities of the sides (Pārsva) and which lies attached at the middle between the loins at their lower regions, feels the Koshtha (abdomen) with the blood and results into death. A hurt to the **Vrihati-Marmas** ||

* It is an Asthi-Marma, half a finger in length and of the Kālántara-māraka class.

† They are Joint-marmas (Sandhi), half a finger in length and of the Vaikalyakara group.

‡ It is a bone Marma, half a finger in length, and of the Kālántara class.

§ It is a S'irā-Marma to the length of half a finger and belongs to the Kālántara class.

|| They are S'irā-Marmas (arterial anastomosis) to the length of half a finger and belong to the Kālántara class.

which commencing from the roots of the breast course round both the sides of the spinal column (Pristha-vamśa), cause excessive bleeding, and the patient dies, as supervening symptoms arise from an excessive loss of blood. An injury to any of the two **Amsa-phalaka-Marmas*** situated on either side of the vertebral column and connected with the scapula brings on anesthesia or atrophy (Śośha) of the arms. There are two Marmas known as **Amsa-Marmas**† which are situated on either side midway between the neck and the head of the arms and connect the Amsa-Pitha (glenoid cavity) and the Skandha (shoulder). An injury to any of these Marmas is attended with an incapacity of moving the hands. Thus the fourteen Marmas in the back have been described. 57-65.

The Jatrugata-Marmas :—Now we shall describe the Marmas which are situated in the regions above the clavicles (Urddhva-Jatru). There are four Dhamani (arteries) about the two sides of the Kantha-Nādi (wind-pipe). Two of them are known as **Nilā**, and the other two as **Manyā**. One Nilā and one Manyā are situated on either side of the larynx, (i.e., anterior and posterior side of the larynx). An injury to any of them produces dumbness, and change of voice (hoarseness), and also the loss of the faculty of taste. ‡ An injury to any of the eight Śirās (arteries), four being on each side of the neck (Grivā), and known as **Śirā-Mātrika-Marmas** §) ends fatally within the day. 65-69.

* It is an Asthi-Marma, half a finger in length and is Vaikalyakara.

† They are Snāyu-Marmas, half a finger in length and of the Vaikalyakara class.

‡ They are Ś'irā-Marmas, to the length of four fingers and of the Vaikalyakara class.

§ They are Ś'irā-Marmas, four fingers in length and of the Sadyo-Māran class.



An injury to any of the two **Marmas** lying at the junction of the head and neck (**Grivá**) and known as **Krikátiká*** (transverse process of the arch of the atlas) results in a free movement of the head. A hurt to any of the **Marmas** attached to the lower end of an ear (posterior extrensic ligament) and known as the **Vidhura†** **Marma** results in the loss of hearing. An injury to the **Phana-Marmas‡** attached to the interior channels of both the nostrils, results in the loss of the faculty of smell. An injury to the **Apánga-Marmas§** (Anastomosis of the infra-orbital artery) situated below the tips of the eye-brows and about the external corners of the eyes, brings on blindness or defective vision. An injury to the **Ávarta-Marmas||** situated above and below the eye-brows, brings on blindness and impaired vision. An injury to the **Sankha-Marmas¶** (meeting or suture of the temporal, frontal and sphenoid bones—*Pterion*), situated over the tips of the eye-brows and between the ears and the forehead, results in death within the day. The **Marmas** situated over the two temples (**Sankha**) and at the border of the hair (sculp) are called **Utkshepa-Marma** (meeting of the posterior and anterior temporal arteries)\$. An extraction of a shaft (**Salya**) or of any

* They are **Sandhi-Marmas**, half a finger in length, and of the **Vaikalyakara** group.

† It is a **S'náyu-Marma**, and is of the **Vaikalyakara** class.

‡ They are **S'irá-Marmas** to the length of half a finger and of the **Vaikalyakara** class.

§ They are **S'irá-Marmas** to the length of half a finger and of the **Vaikalyakara** class.

|| They are **Sandhi-Marmas**, to the length of half a finger and of the **Vaikalyakara** class.

¶ They are **Asthi-Marmas** to the length of half a finger.

\$ They are **S'náyu-Marmas**, half a finger in length and of the **Vis'alyaghna** class.



extraneous pointed thing lodged into these Marmas, results in the death of the patient, who, on the contrary, lives as long as the shaft is allowed to remain inside or if the shaft comes out itself (after putrefaction). 70-75.

An injury to the **Sthapani-Marma*** (nasal arch of the frontal veins), situated in the middle of the eye-brows, ends in the manner of the preceding one. An injury to any of the five joints of the head which are known as the **Simanta-Marmas†**, results in fear, insensibility and madness of the patient and terminates in death. An injury to any of the four **Sringátaka-Marmas‡** which forms the junction of the four **Śirás** (nerves), (branches of the facial artery) and soothes the nose, the eyes, the ears and the tongue, proves fatal within the day. An injury to the **Adhipati-Marmas §** (the vertical groove on the frontal bone) which is marked in the inner side of the roof of the cranium by the **Śirā-Sannipāta** (superior longitudinal sinus), and on the exterior side by the ringlet of the hair (**Romāvarta**) proves fatal within the day. Thus we have described the thirty-seven Marmas, situated in the region above the **clavicles** (**Urddhva-Jatru**). 76-80.

Memorable Verses :—An incision should be made at the spot a finger's width remote from the **Urvi**, **Kurchcha-Śirā**, **Vitapa**, **Kaksha** and a **Pársva-Marma** ; whereas, a clear space of two fingers should

* They are **S'irā-Marmas** to the length of half a finger and of the **Visályaghna** class.

† They are **Sandhi-Marmas** to the length of four fingers and of the **Kálántara-Pránahara** class.

‡ They are **S'irā-Marmas** to the length of four fingers and of the **Sadyah-Pránahara** class.

§ It is a **Sandhi-Marma**, half a finger in length and of the **Sadyah-Pránahara** class.

be avoided from its situation in making any incision about the Stanamula, Manivandha or Gulpha-Marma. Similarly a space of three fingers should be avoided from the Hridaya, Vasti, Kurchcha, Guda or Nábhi Marma ; and a space of four fingers should be avoided in respect of the four Śringátakas, five Simantas and ten Marmas in the neck (Nilá etc.) ; a space of half a finger being the rule in respect of the remaining (fifty-six).^{*} Men, versed in the science of surgery, have laid down the rule that, in a case of surgical operation, the situation and dimension of each local Marma should be first taken into account and the incision should be made in a way so as not to affect that particular Marma, inasmuch as an incision, even extending or affecting, in the least, the edge or the side of the Marma, may prove fatal. Hence all the Marma-Sthánas should be carefully avoided in a surgical operation. 8r.

The amputation of a hand or a leg may not prove fatal whereas a wound in any of the Marmas situated therein is sure to bring on death. The vessels become contracted in the case of a cut in the leg or in the hand of a man, and hence the incidental bleeding is comparatively scantier. Therefore it is that a cut in any of these parts of the body, however painful, does not necessarily prove fatal, like the lopping off of the branches of a tree. On the contrary, a man pierced into in any such Marmas, as the Kshipra or the Tala, suffers from excessive

* Some are of opinion that a surgical operation (in the case of the remaining fifty-six) should be made, leaving a space equal in measurement to the dimensions of a palm (from the affected part). Gayádása, having learnt from Bhoja, explains that a space of two fingers should be left (from the affected part) in making surgical operations of the ten marmas, namely, the two Gulphas, the roots of the two breasts, the four Indravastis, and the two Manivandhas.

hæmorrhage (from the affected part) and attended with an excruciating pain, owing to the derangement of the Váyu, and meets his doom like a tree whose roots have been severed. Hence, in a case of piercing or of injury to any of these Marmas, the hand or the leg should be immediately amputated at the wrist or at the ankle (respectively). 82.

The medical authorities have described the Marmas to have covered half in the scope of Salya Tantra (Surgery), inasmuch as a person hurt in any of the Marmas dies presently (i. e., within seven days of the hurt). A deformity of the organ is sure to result from an injury to one of these Marmas, even if death be averted by a course of judicious and skillful medical treatment. 83.

The life of the patient is not to be despaired of even in the case of fracture or crushing of a bone of the Koshtha, Sírah and Kapála or perforation of the intestines etc., if the local Marmas are found not to be in any way hurt or affected. Recovery is common in cases of cuts (pierce) in the Sakthi, Bhuja, Páda and Kara or in any other part of the body and even where a whole leg or hand is found to be severed and carried away if the Marmas are not in any way hurt or affected. 84.

These Marmas form the primary seats of the Váyu, the Soma (lunar) and Tejas (fiery principles of the organism), as well as of the three fundamental qualities of Satva, Rajas and Tamas, and that is the reason why a man, hurt in any of the Marmas, does not live. 85.

An injury to a Marma of the Sadyah-Pránahara class (in which death occurs within a day) is attended with the imperfection of the sense organs, loss of consciousness, bewilderment of Manah (mind) and Buddhi



(intellect) and various kinds of pain. An injury to a Marma of the Kálántara group (of a person) is sure to be attended with the loss of Dhátus (blood etc.) and various kinds of supervening symptoms (Upadrava) which end in death. The body of a person, hurt in any of the Vaikalyakara Marmas, may remain operative only under a skillful medical treatment; but a deformity of the affected organ is inevitable. An injury to any of the Viśalyaghna Marmas ends in death for the reasons mentioned above. An injury to any of the Rujákara Marmas gives rise to various kinds of pain in the affected organ, which may ultimately bring about a deformity of the same, if placed under the treatment of an ignorant and unskillful Vaidya (Surgeon). 86.

An injury to the adjacent part of a Marma, whether incidental to a cut, incision, blow (Abhigháta), burn, puncture, or to any other cause exhibits the same series of symptoms as an actually affected one. An injury to a Marma, whether it be severe or slight, is sure to bring deformity or death.* 87.

The diseases which are seated in the Marmas, are generally serious, but they may be made to prove amenable with the greatest care and difficulty. 88-89.

* Gayádása does not read this verse.

Thus ends the sixth Chapter of the S'árita Sthánam in the Sus'ruta Samhitá, which treats of Marmas.



CHAPTER VII.

Now we shall discourse on the Śáriram which treats of the description and classification of Śírā or vascular system * (Śírā-Varnana-Vibhaktināma Śáriram).

There are seven hundred Śírás (vessels) in the human organism (except those which cannot be counted for their extremely attenuated size). The vessels (Śírás) by their contractibility and expansibility &c, sustain and nourish the organism in the same manner as streamlets and canals serve to keep a field or a garden moist and fruitful. From the principal or central trunk hundreds of small and minute vessels branch off and spread all over the body, just as small or minute fibres are found to emanate from the large central vein of the leaf of a plant. They originate from the umbilical region and thence they spread all over the body upwards and downwards and obliquely. 2.

Memorable Verses :—All the Śírás (vessels) that are found in the organisms of created beings, originate from the umbilical region (Nábhi)† and thence they spread all over their bodies. The life of an organic animal is seated in the vessels surrounding its navel which forms their starting point. The navel in its turn rests on or is attached to the Pránas (the life-carrying vessels—nerves attached to it) in the same

* The Sanskrita term Śírā denotes veins, nerves, arteries and lymphatic vessels as well. Some read *S'irā-Varna* (different colours of the Śírás) in lieu of *S'irā-varnana* (description of Śírás).

† Most probably the idea is derived from the appearance of the Śírás in their foetal state.



manner as the nave of a wheel supports the spokes, and the spokes in their turn support the nave. 3-4.

Principal Śirás :—Of these Śirás (vessels), forty are principal ones, of which ten are Vāyu-carrying Śirás (nerves), ten are Pitta-carrying Śirás (veins), ten convey Kapha (lymphatic vessels?) and ten are blood-carrying Śirás (arteries). Of these the Vāyu-carrying Śirás, situated in the specific receptacle of that bodily principle (Vāta), are again found to branch out in one hundred and seventy five smaller branches (ramifications). Similarly, each of the remaining Pitta-carrying, Kapha-carrying and blood-carrying vessels (Śirás) situated in their specific receptacles, (*i.e.*, in the receptacles of Pitta, Kapha and spleen and liver respectively) are found to branch out in as many numbers (one hundred and seventy-five),—thus making a total of seven hundred in all. 5.

Their Specific Locations :—There are twenty-five Vāyu-carrying Śirás (nerves) in one leg and the same count applies to the other. Similarly there are twenty five Vāyu-carrying Śirás (vessels) in each of the hands. There are thirty-four Vāyu-carrying vessels in the Koshtha (trunk); of these eight occur in the pelvic regions attached with the anus and the penis; two in each of the sides, six in the back, six in the Udara (cavity of the abdomen), and ten in the region of the chest. There are forty-one Vāyu-carrying Śirás (vessels) situated in the region above the clavicles. Of these fourteen occur in the neck; four in the two ears; nine in the tongue; six in the nose and eight in the two eyes. Thus we have finished the description of the one hundred and seventy-five Śirás that carry Vāyu. 6.

What has been said of these Vāyu-carrying vessels (Śirás) will also hold good to the rest (in blood-carrying,

Pitta-carrying and Kapha-carrying channels in the respective regions of the body), with the exception that in these three cases, (Pitta, Kapha and blood) ten occur in the eyes and two in the ears in lieu of eight and four respectively, as in the case of Váyu-carrying *Síras* (vessels). Thus we have described the seven hundred *Síras* with their branches. 7.

Memorable Verses—The Váyu-carrying *Síras* :—The Váyu in its normal state and coursing through its specific *Síras* (vessels) helps the unobstructed performance of its specific functions *viz.*, expansion, contraction, speech, &c., and produces the clearness and non-illusiveness of Buddhi (intellect) and the sense-organs, whereas a coursing of the said Váyu in a deranged condition through the aforesaid *Síras* (vessels), gives rise to a host of such diseases as are due to the derangement of Váyu. 8.

The Pitta-carrying *Síras* :—The Pitta in its normal state and coursing through its specific *Síras* (vessels) produces the healthy glow of complexion, relish for food, kindling of the appetite, healthfulness and other good effects, characteristic of the Pitta, which however being aggravated and coursing through them gives rise to a host of Pittaja diseases. 9.

The Kapha-conveying *Síras* :—The Kapha in its normal state and coursing through its specific *Síras* (vessels) smoothes and contributes to the firmness of the limbs and joints, improves the strength and produces all other good effects specially belonging to it, whereas the same Kapha, flowing through them in an aggravated condition, ushers in a large number of the Kaphaja distempers of the body. 10.

The Rakta-carrying *Síras* :—The blood in its normal state and flowing through its specific *Síras*

(vessels) strengthens the other fundamental principles (Dhátus) of the body, improves the complexion, aids the organ of touch in the proper performance of its functions and produces other functions characteristic of it in the body. Flowing through them in a vitiated condition, it begets diseases which are due to the derangement of the blood. 11.

There is not a single *Sirá* (vessel) in the body which carries either the *Váyu*, or the *Pitta* or the *Kapha* alone. Hence each of the vessels should be regarded as affording an opportunity for conveying all kinds of the *Doshas* of the body, for as soon as they are deranged and aggravated they seem to flow through all the *Sirás* promiscuously. Hence they are called *Sarva-vahah*. 12.

Specific colours of the *Sirás*:—The vessels which carry the bodily *Váyu* (nerves) have a vermilion (yellowish red) hue and seem to be stuffed with *Váyu*. The *Pitta*-carrying vessels (veins) are coloured blue and felt warm to the touch. The *Kapha*-carrying vessels are hard, cold to the touch and white-coloured. The blood-carrying vessels (arteries) are red and neither too hot, nor too cold. 13.

Now we shall describe the *Sirás* (veins) which a surgeon should not pierce or open, inasmuch as it may result in death, or bodily deformity. An intelligent surgeon shall always bear in mind that sixteen out of the four hundred vessels in the extremities, thirty-two out of the hundred and thirty-six vessels in the trunk and fifty out of the sixty-four vessels in the region above the clavicles, should not be opened or bled on any account. 14-15.

Of the one hundred vessels in a single leg, the one *Jáladhará* (which is attached to the connective tissue

of the Kurchcha-Śirāḥ) as well as the three internal ones, of which two are known as the Urvī-veins and the other as the Lohitāksha, together with the corresponding ones in the other leg and in the two hands, thus making sixteen in all, which are situated in the upper and lower extremities, should be held unfit for opening. Of the thirty-two veins in the pelvic region (Śronī), eight such, known as the four Vitapas (two on each side of the testicles) and the four known as the Katika-tarun as (two on each side) should be considered unfit for bleeding or opening. Of the sixteen veins (eight on each side) at the sides, the one which courses upward from each of the two sides and is attached to the Marma known as the **Pārśva-Sandhi**, should be considered unfit for similar purposes. Of the twenty-four Śirās which are found in either side of the spinal column, an incision should not be made into any of the two Śirās (on each side) known as the Vrihati and which run upward along either side of it (spinal column). Similarly of the twenty-four Śirās in the abdomen, the two along each of the two sides of symphysis pubis should be held unfit for opening or bleeding. Of the forty veins in the chest, the two in the heart, two in the root of each breast and two in each of the Stana-rohita (muscle of the breast) and one in each of the Apastambhas and Apalāpas, making fourteen in all, should not be opened. Thus thirty-two Śirās in the regions of the back (i. e., the sides and the pelvic regions), the abdomen and the chest should be regarded as unfit for opening or other surgical purposes. 16—21.

There are one hundred and sixty-four Śirās in the region above the clavicles. Of these the eight and four (making twelve and respectively known as the eight Mātrikās, the two Nilās and the two Manyās) out of the fifty-six in the neck and the throat, should be



regarded as unfit for opening. Similarly the two veins in the two Krikátikás and two in the two Vidhuras, should be held unfit for similar purposes; thus making sixteen in all in the neck. Of the sixteen vessels (eight on each side) of the Hanus (Jaws), the two Śírás about each of the joint of the jaw-bones should never be opened. 22.

Of the thirty-six* vessels in the tongue, sixteen are situated in the under-surface of that organ and twenty in the upper surface; of these the two speech-carrying and the two taste-carrying ones should be held unfit for venesection. Of the twenty-four vessels in the nose, the four adjacent to the nose proper and the one running into the soft palate should be held unfit for similar purposes. Of the thirty-eight vessels in the two eyes, the one situated at each Apánga should not be opened. Of the ten vessels in the two ears, the sound-carrying one in either ear should not be opened. Of the sixty vessels of the nose and eyes coursing through the region of the forehead, the four vessels adjacent to the sculp proper and the Ávarta-Marma should be held unfit for opening or bleeding. One vessel (Śírá) in each of the two Ávartas and the one in the Sthapani-marma should not be opened (on any account). Of the ten vessels in the temple, the one about each temple-joint should be held unfit for opening or bleeding. Of the twelve vessels in the head, the one

*Gayi asserts that there are eight each of the Váyu-carrying, Pitta-carrying, Kapha-carrying and blood-carrying Śírás in the region of the neck, thus making a total of 32 in place of 36 of the text.

He also holds that there are 28 in place of 36 Śírás in the tongue, 16 in place of 24 in the nose, 24 in place of 38 in the eyes, 16 in place of 10 in the ears and 8 in place of 10 in the temple. In the counting of the Śírás situate in the other parts of the body, he, however, does not differ from the text.

in each of the two Utkshepa-Marmas, one in each of the (five) Simanta-Marmas and one in the Adhipati-Marma, should be held unfit for the purpose. No incision or opening should be made into any of these fifty vessels situated in the region above the clavicles. 23-31.

Memorable verses :—As the stem and leaves etc., of a lotus plant, originated from its bulb, spread over the whole surface of a pool or tank (lit: water), so the vessels emanating from the umbilicus of a man spread over his whole organism. 32.

Thus ends the seventh Chapter of the S'arira Sthānam in the Susruta Samhitā which treats of the description and classification of S'irās (vessels).





CHAPTER VIII.

Now we shall discourse on the Śáriram which treats of the method of Venesection etc.. (**Śírá-Vyadha-Vidhi-Śáriram**). 1.

Persons unfit for Venesection:—The vessel or vessels (Śírá) of an infant, an old man, a perched man, one fatigued and emaciated with endocarditis (Kshata-kshina), a person of timid or coward disposition, a person used up with excessive drinking or sexual enjoyments or tired with the troubles of long journey, an intoxicated person, a patient who has been treated with purgatives, emetics or with Anubásana and Ásthápana measures (enemas), a man who has passed a sleepless night, an impotent (Kliva) or emaciated person, an enceinte, or one afflicted with cough, asthma, high fever, phthisis convulsions, paralysis, thirst, epilepsy, or effects of fasting, should not be pierced or opened. Incisions should not be made into those veins (Śíráś) which are not fit for opening, or into the fit ones, if invisible ; it should be the same with those which cannot be properly ligatured or even if ligatured cannot be raised up. 2.

Diseases which are amenable to acts of venesection have been described before (Śonita-Varnaniya-Adhyáya). Venesection may be performed in the said diseases as well as in those which have not been enumerated in connection with them and also in other cases whether suppurated or unsuppurated, if such a proceeding is deemed necessary and after the application of Sneha and Sveda. Venesection should be made even in the cases declared unfit for it (such as in an infant etc.) in cases of



blood-poisoning (such as snake-bite etc.) and in fatal diseases (Vidradhi etc.). 3-4.

Preliminary rules :—The patient should be duly fomented (Sveda) and anointed (Sneha) with oily preparations. A liquid* food or diet consisting of articles which are antidotal to the bodily principles (Doshas) which engendered the disease or Yavágu (gruel) should be given to him at first. Then at the proper season (i.e., not in the rainy or winter season etc.) the patient should be brought near the surgeon and made to sit or lie down and the part to be incised upon should be bound, neither too loosely (*e.g.*, in the extremities etc.) nor too tightly (*e.g.*, in the head etc.), with any of the accessories, such as cloth, linen, skin, the inner fibres of a bark, creepers etc., so as not to create any pain or agitation in his mind. Then the vein should be duly opened with proper instrument (and with a careful regard to the situation of any local Marma). 5.

Metrical text :—Venesection should not be performed in an extremely cold or hot, cloudy or windy day. It is forbidden to open a vein without necessity or in a healthy person, or in a disease in which such as a proceeding is absolutely prohibited. 6.

The Yantra-Vidhi :—The patient whose vein is to be operated upon should be seated on a stool to the height of an Aratni (distance of the elbow from the tip of the small finger) with his face turned towards the sun. He should keep his legs in a drawn up or contracted posture resting his elbows (Kurpara) on his knee-joints and the hands with his two thumbs closed in his fists placed on (the upper ends of) his Manyás (sterno mastoid muscles). Then having cast the binding

* A liquid food is recommended for the purpose of liquefying the blood so as to bleed easily.



linen on the two closed fists thus placed on the neck, the surgeon should ask another man from the back side of the patient to take hold of the two ends of the cloth with his left hand having the palm turned upward, and then ask him to tie up with his right hand the bandage round the part, neither too diffusely nor too tightly nor too loosely, so as to raise the vein and to press the bandage round the back for a good out-flow of blood. Then he (surgeon) should perform the operation in the desired spot, the patient having been previously asked to sit with his mouth full of air (*i.e.*, he should confine his breathing till the surgical operation is completed). This proceeding should be adopted in opening any vein of the head, save those which are situated in the cavity of the mouth. 7.

In the case of opening a vein (*Śirā*) in the leg, the affected leg should be placed on a level ground, while the other leg should be held in a somewhat contracted posture, at a little higher place. The affected leg should be bound with a piece of linen below its knee-joint and pressed with the hands down to the ankle. A ligature of the above kind should then be tied four fingers above the region to be incised upon, after which the vein should be opened. 8.

In the case of opening a vein (*Śirā*) in the arms, the patient should be caused to sit easily and fixedly with his two thumbs closed in his fists (as above). A ligature of the above-mentioned kind (rope etc.,) should be tied (four fingers above the part to be incised upon and the vein opened in the aforesaid manner. The knee-joint and the elbow should be held in a contracted or drawn up posture at the time of opening a vein in a case of *Gridhrasi* (*Sciatica*) and *Viśvachi*, respectively. The patient should hold his back raised

up and expanded and his head (and shoulders) bent down at the time of opening a vein in the back, shoulders and the Sroni (hips). He should hold his head thrust back and his chest and body expanded at the time of opening a vein in the chest or in the abdomen. 9-12.

He shall embrace his own body with his arms at the time of opening a vein in his sides. The penis should be drawn downward (*i.e.*, in an flaccid state) on a similar occasion in that region. The tongue should be raised up to the roof of the mouth and its fore-part supported by the teeth at the time of opening a vein in its under-surface. The patient should be told to keep his mouth fully open at the time of opening a vein in the gums or in the palate. Similarly a Surgeon should devise proper and adequate means for the purpose of raising up (distinct appearance of) a Śirā (vein) and determine the nature of the bandage to be used therein according to the exigencies (*i.e.*, the health and the kind of diseases of the patient), of each case. 13-17.

An incision to the depth of a barley-corn should be made with a Vrihimukha instrument (into a vein situated) in the muscular parts of the body, whereas the instrument should be thrust only half that depth or to the depth of a *Vrihi* seed in other places (*Vrihi* here signifies *S'ukadhānya* as well as *Rakta-sāli*). An incision over a bone should be made with the Kuthārikā (small surgical axe) to the half depth of a barley-corn. 18-19.

Memorable Verses :—An opening should be effected in such a day in the rainy season as would be devoid of the rumblings of a thunder-cloud, during the cold (*i.e.*, in the fourth) part of the day in summer, and at noon in the winter season (Hemanta). These are the only three times of opening a vein. A well



and successfully pierced vein bleeds in streams (almost simultaneously with the thrusting of the knife) and spontaneously stops after a Muhurta (a little while). The vitiated blood is seen first to flow out of an opened vein, like the drop of yellow pigment first coming out of a *Kusumbha* flower. Blood does not flow out from an incision made into a vein of an unconscious (*Murchchhita*), much frightened, or a thirsty patient. An incision of a vein without proper bandaging and raising up is attended with a similar result. 20-23.

A weak person, or one affected with the unusual derangement of the bodily Doshas etc., or one fainted (under operation), should not be subjected to a measure of continuous blood-letting at a time; instead of that, the vein should be opened afresh in the same afternoon or on the following day, or on the third day (as the exigency requires). An intelligent surgeon should not allow the flow of blood to an excess but should stop the flow even with a remnant of the diseased blood in the system and administer soothing internal remedies (*Samsāmana*) for the purification of the diseased remnant. Bleeding to the quantity of a *Prastha** measure should be deemed sufficient for a strong and adult patient, stuffed with a large quantity of the deranged Doshas (in the body). 24-26.

The vein should be incised with a *Vrihimukha* instrument at a distance of two fingers above the seat of the *Kshipra-marma* in such diseases as *Pādadhā*, *Pāda-harsha*, *Ava-vāhuka*, *Chippa*, *Visarpa*, *Vāta-rakta*, *Vāta-kantaka*, *Vicharchikā*, *Pādadhāri* etc. The mode of opening a vein in the case of *Ślipada* (*Elephantiasis*)

* In medicinal preparations, a *Prastha* measure is understood to be four seers in the case of liquids, but in cases of excreta due to emetic and purgative measures and of **blood-letting**, a *Prastha* is meant to be thirteen *Palas* and a half only.



would be described under the treatment of that disease. In Vāta-rogas, such as Kroshtuka-śīrah (Synovites), maimedness (Pangu) and lameness (Khanja), the Śīrá (vein) of the Janghá (lower leg-calf), four fingers above the Gulpha, should be opened. In cases of Apachi (scrofula), the vein should be opened simultaneously with the appearance of the disease two fingers below the Indravasti-marma. In a case of Gridhrasi (sciatica), the vein should be opened four fingers above or below the Jānu (knee-joint). In a case of goitre, the veins attached to the roots of the Uru (thighs) should be opened. The instructions regarding the opening of a vein in one leg shall hold good in the case of that in the other, as well as in cases of those situated in the two upper extremities (hands), but the speciality is that in a case of enlarged spleen, the vein near the Kurpara-sandhi (elbow-joint) of the left hand or that inside the fourth and the fifth fingers should be opened. Similarly in a case of Yakriddālyodara or Kaphodara, the corresponding vein in the right hand should be opened. Several authorities advise the opening of the same vein in cases of cough and asthma* due to the action of the deranged Kapha. 27-35.

In a case of Viśvachi, the same argument holds good (four fingers above or below the Kurpara-sandhi) as in a case of Gridhrasi. In a case of Pravāhikā (diarrhoea) attended with Śūla (colic), the vein within two fingers width around of the Pelvis (Śroni) should be opened. The vein of the penis should be opened in a case of Parikartikā (D.R.-Parivartikā), Upadansā, Śuka-dosha and seminal disorders. The vein on either side of

* Gayi holds that in cases of asthma and cough venesection should be had recourse to only when they are in a mild form.



The scrotum should be opened in a case of hydrocele (Mutra-Vridhhi). 36-39.

The vein four fingers below the navel and on the left side of the Sevani (suture) should be opened in a case of Dakodara (ascites). In a case of internal abscess and colic in the sides (Pleurodynia), the vein in the region between the breast and the left armpit should be opened. Several authorities assert that in a case of Avaváhuka and Váhuśosha (atrophy of the hand), the vein between the Amsas (shoulders) should be opened. In a case of *Tritiyaka* (Tertian) fever, the vein inside the Trika-Sandhi should be opened. In a case of *Chaturthaka* fever, a vein joined with either side of and below the shoulder-joint should be opened. In a case of Apasmára, the middle vein adjacent to the joint of the jaw-bones (Hanu-Sandhi) should be opened. In a case of insanity and hysteria* (Apasmára), the vein between the temple and the edge of the sculp or those in the Apánga (tips of the eyes), the forehead or the chest should be opened. In cases of the diseases of the tongue and the teeth, the veins on the under-surface (Adho-Jihvá) of the tongue should be opened. In the case of a disease of the palate, the local vein should be opened. In diseases of the ears and specially in a case of inflammatory ear-ache (Karna-Sûla), the vein along the region above the ears should be opened. In diseases of the nose and specially in a case of the loss of the smelling faculty, the vein at the tip of the nose should be opened. In cases of eye-diseases, such as

* Dallana, however, differs here from the text. He says, on the authority of Vágbhata, that the opening of a vein between the temple and the edge of the sculp or those in the Apánga, the forehead and the chest should be recommended in cases of insanity only, and not in the case of of Apasmára as well (as in the text).

Timira (blindness), **Akshipáka** (ophthalmia) etc., as well as in diseases of the head and in **Adhimantha**, the veins about the nose, the forehead and the **Apánga** (the outer canthus of the eyes), should be opened. 40-51.

Defective Venesection :—Now we shall describe the twenty kinds of defects relating to an opened vein (**Dushta-vyadhana**). They are as follows :—**Durviddhá**, **Atividdhá**, **Kunchitá**, **Pichchitá**, **Kuttitá**, **Aprasrutá**, **Atyudirná**, **Ante-abhihatá**, **Parisushká**, **Kunitá**, **Vepitá**, **Anutthita-viddhá**, **Śastrahatá**, **Tiryag-viddhá**, **Apaviddhá**, **Avyádhyá**, **Vidrutá**, **Dhenuká**, **Punhpunarviddhá** and **Marmaviddhá**, i.e., incised about the **Śirá-marma**, the **Snáyu-marma**, the **Asthi-marma** and the **Sandhi-marma**. 52-53.

Their definitions :—The vein in which an act of venesection is unattended with a satisfactory outflow of blood owing to its being incised with an extremely slender instrument and is marked by an extremely painful swelling in consequence thereof, is called **Durviddhá** (badly incised). The vein in which the incision becomes excessive and no blood comes out properly or enters an internal channel owing to the largeness of the incision, is called **Atividdhá** (over-incised). An opened vein in which the incision has been made in a curving manner and is attended with the foregoing results, is called **Kunchitá** (crooked or contracted). An incised vein presenting a flattened or thrashed appearance on account of its being opened with a blunt knife (**Kantha-Śastra**) is called **Pichchitá** (thrashed). The vein at the sides of which incisions have been successively made, instead of in its body, is called **Kuttitá** (lacerated). An incised vein, unattended with any bleeding owing to the patient's fright, coldness or loss of consciousness, is called **Aprasrutá** (unbleeding).



A vein with a large incision in its body made with a sharp and flat-edged instrument, is called **Atyudirná** (improperly wide-incised). An opened vein in which blood oozes out in small quantity is called **Ante-abhihata** (struck in the interior). An opened vein in an anæmic patient (marked by a total absence of bleeding and) stuffed with Váyu (lit., as if the flow has been dried up by the Váyu), is called **Parisushká** (dried up). A vein opened but to a quarter part of the proper length and attended with a scanty outflow of blood, is called **Kunitá** (partially incised). A vein which trembles owing to its being bandaged at a wrong place and from which blood does not flow out in consequence, is called **Vepitá** (quivering). A vein incised without being previously properly raised up and attended with a similar result (i.e., absence of blood), is called **Anutthita-viddhá**. A vein cut into two and attended with excessive bleeding and inoperativeness of the organ is called **Sastrahata** (knife-cut). A vein incised with an instrument applied slantingly and (consequently) not fully opened, is called **Tiryag-viddhá** (obliquely incised). A vein incised several times and (every time) with an improper instrument, is called **Apaviddhá** (wrongly incised). A vein unfit for opening (i.e., whose opening has been forbidden in the Śástras), is called **Avyádhyá** (unfit for opening). A vein opened carelessly and hastily is called **Vidruta** (erratic). A vein bleeding continuously owing to its being repeatedly pressed and successively opened, is called **Dhenuká**. A vein variously cut owing to its being pierced into the same part with an extremely slender-pointed instrument, is called **Punah-punarvidahá** (repeatedly incised). If a vein in the Snáyu-marmas, the Asthi-marmas, the Śirá-marmas or the Sandhi-marmas be opened, it is



called **Marma-viddhā** and in such cases severe pain, emaciation (Sosha) deformity or (even) death may be the result. 54.

Memorable Verses :—Practice (even) does not give the necessary skill in surgical operation of the veins etc., as they are naturally unsteady and changing like fishes. Hence a vein should be opened with the greatest care. An opening into the body, made by an ignorant and unskilful surgeon, is attended with the aforesaid dangers and many other distressing symptoms. An act of venesection, properly performed, gives more speedy relief than that derived from the application of medicated oil &c., or of plaster as well. Venesection (bleeding) properly performed is half of the treatment described in surgery like the application of Vasti-karmas (enematic measures) in therapeutics. 55.

A man medically anointed (Sneha-karma), diaphorised (Sveda), vomited (Vamana), purged (Virechana), or treated with both the Vasti-karmas (Anuvāsana and Āsthāpana) or bled shall forego anger, physical labour, sexual intercourse, sleep in the day time, excessive talking, physical exercises, riding or driving etc., sitting on his haunches, frequent ramblings, exposure to cold, winds and the sun, hardly digestible, uncongenial and incompatible food until the strength is perfectly restored or, according to some authorities, for a month. These subjects will be fully dealt with later on Āturopa-drava-chikitsā, ch.—39). 56.

Memorable Verses :—The vitiated blood incarcerated in any part of the body should be abstracted therefrom by scarifying it, by cupping it with a Śirā (pipe), a horn, a gourd, or leeches, or by the opening of a vein respectively, according to the density of the blood. (Others assert that) leeches should be applied in



the case of the (vitiated) blood being confined deep into the body, scarification with a surgical instrument should be made in the case of clotted blood, with a pipe in the case of extensive vitiation of the blood throughout the body and with a horn or a gourd in the case of the deranged blood having been seated in the skin. 57-58.

Thus ends the eighth Chapter of the S'árita Sthánam in the Sus'ruta Samhitá which treats of venesection.



CHAPTER IX.

Now we shall discourse on the Śáriram which treats of the description of the arteries, nerves and ducts, etc.*
(Dhamani-Vyákarana-Śáriram). 1.

There are twenty-four Dhamanies (ducts) in all, and all of them have their origins in the naval region (which includes the whole abdominal region†). Several authorities assert that no arbitrary distinctions should be made among the Śíras (veins), Dhamanis (arteries), and the Srotas, (channels), since Dhamanis and Srotas are but different modifications of one original kind of Śirá (vessels). But this opinion is not a sound one inasmuch as they have got different natures, origins and functions and as being described so in the Áyurveda. But owing to their adjacent positions, the existence of several authoritative dicta (Ápta-vák) regarding the oneness of their character, similarity of their functions, and the minute nature of their shape, they appear to be homologous in their action, even amidst the real diversities in their work and office. 2.

Of the twenty-four Dhamanis, which (originally) have their roots in the naval region (Nábhi), ten have upward course, ten have downward course, and four flow laterally or transversely. 3.

Functions of the up-coursing Dhamanis:—The ten up-coursing Dhamanis (nerves)

* Sans. Dhama—to be filled with air, so called from the fact of their being distended with air after death.

† So far, as in foetal life, allantoic arteries and the umbilical veins subserve the purposes of nutrition, excretion, etc., and reflects the rudimentary vascular system.



perform such specific functions of the body, as sound, touch, taste, sight, smell, inspiration, sighing, yawning, sneezing, laughter, speech, and weeping, etc., and tend to maintain the integrity of the body. These Dhamanis, reaching the heart, respectively ramify themselves into three branches, thus making thirty (ramifications in all). Ten of these serve the following purposes, *viz.*, two serve as the channels of the bodily Vāyu, two of the Pitta, two of the Kapha, two of the blood, and two of the Rasa (lymph chyle). Eight of the remaining ones (twenty), serve the following functions, *viz.*, two of them carry sound, two sight or colour, two smell, and two taste. Moreover a man speaks with the help of another two, makes sound with the help of another couple, sleeps through the instrumentality of another pair (couple), and wakes up with the help of another couple. Two of the Dhamanis (ducts) carry the fluid of lachrymation, two of them (ducts), attached to the breasts of a woman, carry milk of her breasts, which, coursing through the breast of a man, convey his seminal fluid. Thus we have described the thirty Dhamanis with their ramifications. These sustain and maintain the integrity (of the limbs and members of the body) above the (line of) umbilicus, such as the Udara, the sides, the back, the chest, the neck, the shoulders and the arms. 4.

Memorable Verse:—The up-coursing Dhamanis duly perform the offices stated above. Now I shall describe the specific functions, etc., (*i.e.*, nature, office, and situations, etc.) of the down-coursing ones. 5.

Functions of the down-coursing Dhamanis:—The down-coursing Dhamanis respectively form the channels for the downward conveyance of Vāyu (flatus), urine, stool, semen, and catamenial

fluid, etc. These Dhamanis reaching down into the Pittásāya (receptacle of the Pitta) separate the serum prepared out of the food and drink through the agency of the local heat (and pitta), and carry it to the remotest parts of the organism maintaining their healthy moisture, supplying them with the necessary principles of nutrition and (ultimately) conveying them to the up-coursing and lateral Dhamanis, in order to be conveyed to the parts traversed by them respectively. Thus they indirectly serve to supply the heart with its quota of healthy Rasa (serus fluid), if not in a direct way. Moreover they tend to separate the effete matter (urine, stool and sweat) from the fully transformed lymph-chyle in the abdomen, the stomach and the small intestines (Ámāsāya and Pakvāsāya). Each of the down-coursing Dhamanis is found to ramify into three branches at a place midway between the Ámāsāya (stomach) and the Pakvāsāya (intestines). Thus they number thirty in all. The functions of the ten out of these (thirty vessels) are as follows, *viz.*, two serve to carry Vāyu, two Pitta, two Kapha, two blood, and two Rasa (lymph-chyle). Two of these Dhamanis, running into the intestines, carry the food, another two carry the Toya* (watery) part, another two, running into the bladder, serve to carry out the urine (from the bladder), another two carry the semen, and another two serve as the channels of transmission and emission of the same fluid and serve to carry the ovarian discharge in women. The two Dhamanis, attached to the large intestine (Sthulāntra), serve as the channels of faecal matter, while the remaining eight convey perspiration to the lateral-coursing Dhamanis. Thus we have finished describing these thirty Dhamanis with their ramifications. These sustain and maintain the

* This watery part reaching the bladder is transformed into urine.



integrity of the parts of the body below the naval region, such as the Pakvása'ya (Intestine), the waist, the organic principles of stool and urine, the organs of generation, the anus, the bladder, and the lower limbs of the body (Sakthi) (according to their utility in the physical economy of the organism). 6.

Memorable Verse :—These down-coursing Dhamanis perform the afore-said functions. Now I shall describe the specific functions (*i.e.*, nature, office, and situations, etc.,) of the lateral-coursing Dhamanis. 7.

Functions of the lateral-coursing Dhamanis :—The four lateral-coursing Dhamanis, gradually ramifying themselves into hundreds and thousands of branches, simply baffle counting. The net-work of these Dhamanis spreads over the whole organism and maintain its integrity. Their exterior orifices are attached to the roots of hairs (pores of the skin) through which they convey the perspiration and the Rasa (serum), thus supplying the body, both internally and externally, with the soothing nutritions (moisture of healthy lymph-chyle). The effects and potencies of the articles of anointment, sprinkling, immersion, and plasters, enter through these orifices into the internal organism through the agency of the heat in the skin, and sensations of a pleasant or painful contact are experienced through their instrumentality. Thus we have finished describing the four lateral-coursing Dhamanis with their ramifications throughout the whole organism. 8.

Memorable Verses :—The Dhamanis have got pores in their sides through which they carry the Rasa (lymph-chyle) throughout the organism, like the filaments and fibres of water-lily and lotus. These Dhamanis furnish the self-conscious Ego, confined in

the material body, which is the resultant of the combination of the five material elements, with a distinct sensation* peculiar to each of the five sense-organs† and break up the combination (of the five material elements) at the time of death. 9—10.

Now we shall describe the symptoms produced by a **Srota** (duct or channel) pierced at its root or starting point. The ducts or channels respectively conveying the life, the food, the water, (the organic principle of) the **Rasa** (serum), the blood, the muscles, the fat, the urine, the stool, the semen, and the catamenial blood, naturally fall within the scope of Surgery (**Sālya-tantra**). Several authorities assert that the **Srotas** (vessels) are innumerable‡, and perform different functions in their different aspects.

The two **Srotas** (channels) of **Prāna** (bronchi) have their roots in the heart and the **Rasa**-carrying **Dhamanis** (pulmonary arteries). An injury to any of these **Srotas** (vessels) produces groaning, bending down of the body, loss of consciousness (**Moha**), illusion, and shivering, or may ultimately prove fatal. The **food-carrying Srotas** (**Æsophagus**) have their roots in the **Āmāsaya** (stomach) and in the food-carrying **Dhamanis** (intestines). An injury to or piercing of such a duct (**Srota**), gives rise to tympanites, colic pain, aversion to food, vomiting, thirst, blindness or darkness of vision, or may even end in death. There are two **water-carrying** (**Udaka-vaha**) ducts or channels which have their roots in the palate and the **Kloma**, and a piercing of any

* Hearing, touch, smell, taste, and sight.

† Eyes, ears, nose, tongue and skin.

‡ But this science does not take any cognisance of them, since the pain incidental to a piercing of, or an injury to, any of these extremely attenuated channels, must be slight in its character.



of these makes the patient thirsty and ends in his instantaneous death (*i. e.*, within seven days). The **serum-carrying** (Rasa-vaha) ducts are two in number and have their roots in (the viscus of) the heart and the serum-carrying Dhamanis (vessels). An injury to or piercing of any of these ducts gives rise to Śosha (consumption) and symptoms identical with those developed by a hurt to the Prāna-vaha channels of the body, ending in death. The **blood-carrying** Srotas (channels) are two in number and have their roots in the spleen and the liver, and the blood-carrying Dhamanis (capillaries in general). An injury to any of these channels is attended with pallor, bluishness of complexion, fever, burning sensations, excessive hæmorrhage, and redness of the eyes. The two **muscle-carrying** Srotas (ducts or channels) have their roots in the (Snāyu), nerves Tvak (serum), and the blood-carrying Dhamanis (capillaries). An injury to any of these channels is characterised by swelling, loss or atrophy of the muscles, appearance of varicose veins or may (ultimately) result in death. The **fat-carrying** Srotas (ducts) are two in number and have their roots in the region of the Kati (waist) and the Vrikkas (kidneys). An injury to any of these bring in (a copious flow of) perspiration, oily gloss of the skin, parched condition of the palate, extensive swelling (of the affected locality) and thirst. The two **urine carrying** Srotas (channels) have their roots in the bladder and the penis (urethra). An injury to any of these is marked by constipation or epistaxis in the bladder, retention of urine, and numbness of the genitals. The two **stool-carrying** Srotas (ducts) have their roots in the Guda (anus) and the Pakvāsāya (intestines); an injury to any of these is characterised by complete retention of stool (in the bowels), accom-

panied by a distention of the abdomen, foul smell and intussusception of the intestine (as in a case of enterites). The two **semen-carrying** Srotas (ducts) have their roots in the breasts and the testes. An injury to any of them leads to loss of manhood, delayed emission of semen, or blood-streaked character of that fluid. The two **Ārtava-carrying** Srotas (ducts) have their roots in the uterus as well as in the Dhamanis which carry the Ārtava (ovarian product). An injury to any of these brings on sterility, suppression of the menses and incapacity for copulation. A cutting to the Sevani (median raphe of the perineum) exhibits symptoms identical with those of a case of injured bladder or anus, described before. A physician may take in hand the medical treatment of a case of a Srota which has been pierced, but he shall not necessarily entertain any hope of ultimate success. (But time works wonders, and such a case may sometimes end in recovery). A case of pierced duct, from which the dart (Śalya, or the like piercing matter) has been extricated, may be medically treated (without holding out any prospect of recovery to the friends of the patient), according to the direction laid down under the head of ulcer (Vrana). 11-12.

Metrical Text:—The ducts emanating from the cavity of the heart, other than the Śirás (veins), Dhamanis (arteries), and found to course through the whole body, are called Srotas (lit. channels or currents). 13.

Thu ends the ninth Chapter of the S'arira Sthānam in the Suśrūta Samhitā which treats of the descriptions of the arteries, ducts and nerves.



CHAPTER X.

Now we shall discourse on the Śáriram which treats of the nursing and management, etc., of pregnant women from the day of conception till parturition (**Garbhini-Vyākaraṇa-Śáriram**). 1.

General Rules :—An enciente, from the first day of conception, should always cherish a clear joyful spirit in a clean body. She should wear clean and white garments, ornaments, &c., engage herself in the doing of peace-giving and benedictory rites and live in devotion to the gods, the Brahmins and her elders and superiors. She should not touch nor come into contact with unclean, deformed or maimed persons, and should forego the use of fetid smelling things, avoid dreadful sights and painful or agitating sounds and the use of dry, stale and dirty food as well as that prepared overnight. Long and distant walks from home, resorts to cremation-grounds or to a solitary retreat, or to a Chaitya*, and sitting under the shadow of a tree should be absolutely forbidden (to her during the period of gestation). Indulgence in anger, fright or other agitating emotions of the mind should be deemed injurious. To carry a heavy load, to talk in a loud voice and all other things which might occasion injury to the foetus, (sexual intercourse, &c.) should be refrained from. The practice of constant anointment and the cleansing of the body, &c., (with Ámalaki, Haridrā, etc.—lit. cosmetics) should be given up. All fatiguing exercises should be discontinued and the rules laid down for the

* Chaitya—is a haunted or diedied tree, or according to others a Budhistic monastery.

guidance of a woman in her menses should be strictly adhered to. The couch and the bed of a pregnant woman should be low, soft and guarded on all sides by a number of soft pillows or cushions. The food should be amply sweet, palatable (Hridya),* well-cooked, prepared with appetising drugs and abounding in fluid substances. These rules should be followed up till delivery. 2.

Special regimen during the period of Gestation:—During the first three months of pregnancy an enciente should partake of food abounding in sweet, cool and fluid articles. Several medical authorities recommend a food made of Shashatika rice with milk, to be given to her specially in the *third* month of gestation, with curd in the fourth, with milk in the fifth and with clarified butter in the sixth month of pregnancy. Food largely composed of milk and butter, as well as relishing (Hridya) food with the soup of the flesh of *jāngala* (wild) animals should be given to her in the fourth, food with milk and clarified butter in the fifth, adequate quantity of clarified butter prepared with (the decoction of) Śvadamshtrá, or gruel (Yavágu) in the sixth; and clarified butter prepared with (the decoction of) the Prithak-parnyádi group in adequate quantities in the seventh month of gestation. These help the foetal development. For the purpose of restoring the Vāyu of her body (nervous system) to the normal course and condition and for the cleansing of the bowels, the enciente should be given an Ásthápana (enema), composed of a decoction of Vadara mixed with Valá, Ativalá, Śatapushpá, Palala (flesh), milk, cream of curd, oil, Saindhava salt,

* "Hridya" here means the **diet** in which there is an abundance of Ojo-producing (albuminous) properties.



Madana fruit, honey and clarified butter. After that she should have an Anuvásana (enema) made up of oil prepared with milk and decoction of the drugs known as the Madhurádi-gana. This restores the Váyu to its normal course and condition, which brings on an easy and natural parturition unattended with any puerperal disorders. Henceforth up to the time of delivery the enciente should have liquid food (Yavágu) made up of emollient substances (fats) and soup of the flesh of Jángala animals (deer, etc.). If treated on these lines the enciente remains healthy and strong, and parturition becomes easy and unattended with evils. An enciente should be made to enter the lying-in chamber in the **ninth** month of her pregnancy and under the auspices of happy stars and propitious lunar conditions. The chamber of confinement (Sutiká-griha) in respect of a Bráhmin, Kshatriya, Vaisya and Sudra mother should be raised on grounds respectively possessed of white, red, yellow and black soils, and made of Vilva, Vata, Tinduka and Bhallátaka wood. Couches should be made of these woods respectively in cases of the different social orders. The walls of the room should be well-plastered and the furniture (necessary accessories) should be placed tidy in their proper places. The door of a lying-in chamber should be made to face the south or the east, and the inner dimensions of the room should be eight cubits in length and four in breadth. Religious rites for warding off the visitation of evil spirits and malignant stars should be undertaken at (the door of) the room. 3.

Signs of imminent parturition —(M.—T.) :—A looseness of the sides of the abdomen and untying of the umbilical cord of the child (from the cardiac cord of its mother) and a perception of the

characteristic pain at the waist would indicate the approach of the time of delivery. A constant and severe pain at the waist and the back, constant (involuntary) motions of the bowels and micturition and mucous discharge from the vulva are the symptoms which are manifest at the time (*i.e.*, a little before) of parturition. 4-5.

Preliminary Measures :—Rites of benediction should be performed for the safety of the enciente in her travail and she should be made to pronounce benedictory Mantras surrounded by male babies on all sides. A fruit with a masculine name should be given in her hand. Her body should be anointed with oil and washed with warm water and she should be made to drink largely a gruel (*Yavāgu*) made of articles (which exert a beneficial virtue at the time). Then she should be laid on her back on a soft and sufficiently spacious bed, her head being placed on a pillow and her legs slightly flexed and drawn up. Four elderly ladies with paired finger-nails and skilled in the art of accouchement and with whom she feels no delicacy, should attend and nurse her at the time. 6.

Then after having gently lubricated the mouth of the parturient canal along the natural direction of the pubic hairs (*Anuloma*) (so as not to create any discomfort in the part) one of them (elderly ladies) should address the enciente as follows :—“O fortunate damsel, try to bear down the child, but do not make such an attempt in the absence of real pain.” On experiencing an untying of the umbilical cord of the child, the enciente should gently make such urgings, whenever she will experience pain in the pelvic, pudendal and pubic regions and in the region between the neck of the bladder and the pelvis. Deep urgings should be



made on the exit of the foetus out of the uterus, and after that deeper urgings should be made during the passage of the child through the canal until delivery. 7.

An urging (made by the enciente) in the absence of any real pain may lead to deafness, dumbness and deformity of the jaw-bones of the child or subject it to attacks of cough, asthma, consumption, etc., or lead to the diseases of its head, or to the birth of a haunch-backed or deformed child. A case of abnormal presentation (Pratiloma) should be converted into the normal or cephalic one (Anuloma) by version*. 8-9.

In the case of protracted delivery, *e. g.*, an obstruction of the child at the vagina,—the vagina should be fumigated with the fumes of the slough (cast-off skin) of a cobra (snake) or with the fumes of *Pindītaka* (Madana) or the roots of *Hiranyapushpi* (Kantakāri) should be tied (round the neck or the waist) or *Suvarchala* (*Atasi*) or *Vis'alyá* (Pátalá) should be tied round the hand (wrist) and leg (ankle) of the parturient woman. 10.

Post-parturient Measures :—The shreds or membranes lying on the body of the child should be removed immediately after its birth and its mouth should be cleansed with clarified butter and rock-salt. Then a linen pad soaked in clarified butter† should be applied on the head of the new-born baby. Then the umbilical cord, after having been slightly drawn out, should be ligatured with one end of a string at a point eight fingers apart from its navel, the other end

* The various forms of (Pratiloma) abnormal presentations have been described under Mudha-Garbha Nidānam (Nidán-Sthána—Chap. IX.†) and their treatment is to be found in Chikitsá-Sthána—Chap. XV.

† Brahmiadeva recommends Valá-Taila instead of clarified butter.

of the string being tied round its neck ; then the umbilical cord should be severed immediately above the ligature. 11.

Natal Rites :—Then having sprayed (the face of) the baby with cold water, the post-natal rites should be performed unto it. After that the baby should be made to lick an electuary composed of honey, clarified butter and the expressed juice of *Bráhmī* leaves and *Anantá*, mixed with (half a Rati weight of) gold dust and given with the ring-finger of the feeder. Then the body of the child should be anointed with Valá-taila and it should be bathed in an infusion of the barks of *Kshiri* trees, or in the washings (decoctions) of drugs known as the *Sarvagandha* (Eládi group), or in water in which red-hot gold or silver bar has been immersed, or in a tepid decoction of *Kapittha* leaves, according to the nature of the season, the preponderance of the deranged Doshas in its body and according to its physical conditions. 12.

Diet for the Child—(M.—T.) :—The milk in the breasts of a newly parturient woman sets in three or four days after parturition owing to the dilation of the orifices of the milk ducts (galactoferous ducts). Hence the baby should be fed thrice daily (morning, noon and evening) on a handful (child's own hand) of clarified butter and honey mixed with (a Rati weight of) pulverized *Anantá* roots sanctified with Mantras on the first day ; and on the second and third days the child should be fed on clarified butter prepared with the *Lakshandá* (root). On the following (fourth) day the child should be fed on its handful of honey and clarified butter only twice (*i. e.*, in the morning and at noon). (From the evening of fourth day) the mother should first squeeze off a quantity of her milk and then give



the child her breast. (This rule should be observed at the time of tending the child every day). 13-14.

Treatment of the mother :—The body of the mother should be anointed (after parturition) with the Valá-Taila and treated (both internally and externally) with a decoction of Vāyu-subduing drugs (such as the *Bhadra-Dārvādi* group, etc.). If still there be any abnormality in the condition of the Doshas (the discharge of vitiated blood *i. e.*, lochia), the mother should be given to drink a luke-warm solution of treacle mixed with powders of *Pippali*, *Pippali* roots, *Hasti-pippali*, *Chitraka* and *S'ringavera*, and the medicine should be continued for two or three days or longer, (if necessary), till the disappearance of the vitiated blood (lochia). When the discharge gets normal (*i. e.*, on the appearance of healthy lochia), the mother should be made to take for three days a gruel (*Yavāgu*) prepared with the decoction of the drugs constituting the *Vidāri-Gandhādi Gana* and mixed with (a good quantity of) clarified butter or a *Yavāgu* prepared in milk. After that a meal of boiled *Sāli*-rice and a broth made from the meats of *Jāngala* animals boiled with barley, *Kola* and *Kulattha* pulse, should be prescribed for her, taking into consideration the strength and the condition of her appetite (*Agni* or digesting power). The mother should observe this regimen of diet and conduct for one month and a half (after delivery). After this period she may be at liberty to choose any food to her liking and revert to her natural mode of living. According to several authorities, however, a woman does not regain her natural temperament of body till the reappearance of the healthy menstruation (after parturition). 15.

A strong but newly delivered woman, born and

bred up in a Jāngala country should be given to drink, for three or five nights, either oil or clarified butter in an adequate quantity with an after-potion consisting of the decoction of drugs constituting the group known as the *Pippalyādi Gana*. She should be daily anointed with oil, etc. If, however, of delicate health, she should be made to take, for three or five nights in succession, a medicated Yavāgu (gruel) as described in the last para. Thenceforth a diet of demulcent properties should be prescribed for her and her body should be regularly washed with a copious quantity of tepid water. A mother, after parturition, should forego (for a considerable time) sexual intercourse, physical labour and indulgence in irascible emotions,* etc. 16.

Memorable Verses :—Any disease acquired by a newly delivered mother (Sutikā) by her injudicious conduct of life soon lapses into one of a difficult type (hard to cure); and it becomes incurable if it be due to too much fasting. Hence a wise physician should treat her with such measures as are natural and congenial to her temperament, the time, the place and the nature of the disease, so that she may not be afflicted with any evil effect. 17.

A placenta retained in the uterus causes constipation (Ānáha) of the bowels and distention of the abdomen (tympanites). Hence in such a case her throat should be tickled with a finger covered with hair; or the exterior orifice of the vagina should be fumigated with the fumes of the cast-off skin of a snake, *Katuka*, *Alāvu*, *Kritavedhana* and mustard seeds mixed with mustard oil. In the alternative, a plaster of *Lāngali*

* Fifteen kinds of emotions as described in the thirty-ninth chapter of the Chikitsā-sthānam.



roots should be applied to the palms and soles of her hands and feet ; or the milky juice of *Snuhi* tree should be applied over her scalp ; or a compound made of pasted *Lāngali* roots and *Kushtha* mixed with either wine or the cow's urine should be given her for drink. A Kalka either of *S'āli* roots or of the drugs constituting the *Pippalyādi Gana* mixed with wine (*Surā*) should be given her for the purpose. In the alternative, an *Āsthāpana* (enema) of white mustard seeds *Kushtha* (*Kuda*), *Lāngali*, and the milky juice of *Mahāvriksha*, mixed with *Surā-manda* should be prescribed. (If the above measures fail) an *Uttara-Vasti* (uterine douche) prepared with the aforesaid drugs and boiled in mustard oil should be applied ; or else the placenta should be removed by the hand lubricated with an oleaginous substance and with the nails clipped off. 18.

Makkalla and its Treatment:—The lochia of a newly delivered woman whose organism has become excessively dry on account of profuse use of absorbants or deranged by any other causes,—the lochia being obstructed in its exit by the local *Vāyu*,—gives rise to *Granthi* (nodules) which may appear below the navel, on the sides of the pelvis about the region of the bladder or of the pubis. Severe piercing pain (*Śula*) is felt about the region of the navel, the stomach and the bladder and a sensation of pricking with needle and cutting pain in the intestines. At the same time the abdomen becomes distended with the retention of urine. These are the symptoms of **Makkalla**. In such a case, a decoction of the drugs of the *Viratarvādi Gana* mixed with a powdered compound of the *Ushakādi Gana* should be given her. In the alternative, a potion of carbonate of potash (*Yavakshāra*) dissolved in tepid water or in clarified butter ; of rock-

salt dissolved in the decoction of the *Pippalyādi* Gana ; of a compound made of the powdered drugs of the latter Gana with *Surā-māṇḍa* ; of the powders of cardamom and *Pancho-kolas* dissolved in the decoction of the drugs of the *Varunādi* Gana ; of the powders of pepper and *Bhadrādarū* dissolved in the decoction of the *Prithakparnyādi* Gana ; or of pulverized *Trikatu*, *Chaturjātaka* and *Kustumburu* mixed with old treacle ; or of simple *Arishta*, should be prescribed. 19.

Management of the Child :—The baby being wrapped up in silk should be laid on a bed covered with a silken sheet ; it should be fanned with the branches of a *Pilu*, *Nimba*, *Vadari*, or *Parushaka* tree. A (thin) pad (*Pichu*) soaked in oil should be constantly kept on the head of the child, and its body should be fumigated with the fumes of drugs (*e.g.*, *Vacha*, mustard, etc.) potent enough to keep off the (evil) influences of demons and evil spirits. The same drugs should be tied round the neck, hands, legs and head of the infant and the floor of the lying-in room should be kept strewn over with pounded sesamum, mustard, linseed (*Atasi*). A fire should also be kept kindled in the chamber. Measures laid down in the chapter on the nursing of an Ulcer-patient (chapter IX. Sutra.) should be observed in the present case as well. 20.

Then on the tenth day of its birth the parents having performed the necessary rites of benediction and celebrated the occasion with suitable festivities, shall give the child a name of their own choice or one determined by its natal astrism, etc. 21.

Lactation and selection of a wet-nurse :—For the healthy growth of the child a wet-nurse should be selected from among the matrons of its own caste (*Varna*), and possessed of the following



necessary qualifications. She should be of middle stature, neither too old nor too young (middle-aged), of sound health, of good character (not irascible or easily excitable), not fickle, ungreedy, neither too thin nor too corpulent, with lips unprotruded, and with healthy and pure milk in her breasts which should neither be too much pendulent nor drawn up. It should be carefully observed that her skin is healthy and unmarked by any moles or stains, she being free from any sort of crime (such as gambling, day-sleep, debauchery, etc.). She should be of an affectionate heart, and with all her children living.

She should be of respectable parentage and consequently possessed of many good qualities, with an exuberance of milk in her breasts, and not in the habit of doing anything that degrades woman in life. A "Śyāma" girl possessed of the aforesaid qualities makes a good wet-nurse. A child nursed at the breast of a woman with upturned or unprominent nipples is apt to be deformed (Karāla) in features, while extremely pendulous (large and flabby) breasts may suffocate the child by covering its mouth and nostrils. Having chosen a wet-nurse of the commendable type, the child with its head well-washed should, on an auspicious day, be laid on her lap wrapped in a clean and untorn linen. The face of the child should be turned towards the north, while the nurse should look to the east at the time. Then, after first having a small quantity of the milk pressed out and the breast washed and consecrated with the following Mantras (incantations) the child should be made to suck her right breast. 22.

Metrical Texts :—"O, thou beautiful damsel, may the four oceans of the earth contribute to the secretion of milk in thy breasts for the purpose of im-

proving the bodily strength of the child. O, thou with a beautiful face, may the child, reared on your milk, attain a long life, like the gods made immortal with drinks of ambrosia". 22.

A child nursed at the breast of any and every woman for want of a nurse of the commendable type, may fall an easy prey to disease, owing to the fact of the promiscuous nature of the milk proving incongenial to its physical temperament. The milk of a nurse not being pressed out and spelled off at the outset may produce cough, difficulty of breathing, or vomiting of the child, owing to the sudden rush of the accumulated milk into its throat choking up the channels. Hence a child should not be allowed to suck in such milk. 23.

The loss or suppression of the milk in the breasts of a woman is usually due to anger, grief, and the absence of natural affection for her child, etc. For the purpose of establishing a flow in her breast, her equanimity should be first restored, and diets consisting of *Sáli*-rice, barley, wheat, *Shashtika*, meat-soup, wine (*Surá*), *Souviraka*, sesamum-paste, garlic, fish, *Kas'eruka*, *S'ringátaka*, lotus-stalk, *Vidári-kandí*, *Madhuka* flower, *S'atárari*, *Naliká*, *Alávu*, and *Kála-S'áka*, etc., should be prescribed. 24.

Examination, etc., of milk :—The breast-milk of a nurse or a mother should be tested by casting it in water. The milk which is thin, cold, clear, and tinged like the hue of a conch-shell, is found to be easily miscible with water, does not give rise to froths and shreds, and neither floats nor sinks in water, should be regarded as **pure and healthy**. A child fed on such milk is sure to thrive and gain in strength and health. A child should not be allowed to take the breast of a hungry, aggrieved, fatigued, too thin, too corpulent, fevered, or a pregnant woman, nor of one in



whom the assimilated food is followed by an acid reaction, or of one who is fond of incongenial and unhealthy dietary, or whose fundamental principles are vitiated. A child should not be given the breast until an administered medicine is assimilated in its organism, lest this should give rise to a violent aggravation of the pharmacological action of the medicine, as well as of the deranged Doshas (Váyu, Pitta, etc.), and the refuse matters (Malas) of its body. 25.

Memorable Verses :—The Doshas (Váyu, Pitta and Kapha) of a wet-nurse are aggravated by ingestion of indigestible or incompatible food, or of those articles which tend to derange the Doshas of the body, and hence her milk may be vitiated. A child, fed on the vitiated milk of a woman, vitiated by the deranged Doshas owing to injudicious and intemperate eating and living, falls an easy prey to physical disease. An intelligent physician in such a case should devise means for the purification of the milk as well as of the deranged Doshas which account for such vitiation (inasmuch as the medication of the child alone will not produce any satisfactory effect). 26-27.

Infantile diseases and their Diagnosis :—A child constantly touches its diseased part or organ and cries for the least touch (by another of that part of its body). If the seat of disease be its head, the child cannot raise nor move that organ and remains with its eyes closely shut. A disease seated in its bladder gives rise to retention of urine, thirst, pain and occasional fainting fits. A retention of urine and stool, discolouring of complexion, vomiting, distention of the abdomen, and gurgling in the intestines indicate the seat of the disease to be its Koshtha (colon). A constant crying (and the child's refusal to be consoled)



would signify that the diseased principle (morbiferous diathesis) extends all through its organism. 28.

Treatment of Infants :—Medicines laid down under the head of a particular disease should likewise be prescribed in the case of its appearance in a child or an infant ; but then only the remedies of mild potency and those which do not tend to disintegrate the bodily fat and Kapha should be given in adequate doses (according to age, etc.) as mentioned hereafter and administered through the vehicle of milk and clarified butter, to a child living on milk alone, while the nurse also is to take the same medicines as well.* In the case of a child fed both on milk and (boiled) rice (*Kshirānnada*, i.e., living on both solid and liquid food) the medicine should be administered both to the child and its wet-nurse. In the case of a child living on solid food only, decoctions (*Kashāya*) etc. should be given to the child and not to the nurse. Medicines to the quantity of a small pinchful may be prescribed for a suckling who has completed its first month of life. *Kalkas* (medicated pastes) should be given to a child fed on both milk and rice to the size of a stone of a plum-fruit (*Kola*), and the dose for a child fed on rice (solid food) only being to the size of a plum (*Kola*).† 29.

* Milk and clarified butter being congenial to the constitution of infants should be used as vehicles for drugs in their cases but, these are not necessary in the case of the nurse.

† According to several other authorities, the dosage in the case of children is to be regulated as follows :—

In the case of a child, one month old, drugs should be given in the form of an electuary through the vehicle of milk, honey, syrup, clarified butter, etc.—the dose being one *Rati* (about two grains) at first, and gradually increased by a *Rati* a month, till it completes one year. After this time the dose is to be one *Māshā* (about twenty grains) for each year of age till he is fifteen.

This dosage, however, does not apply in the present age.—Ed.



Metrical Texts :—In the case of any disease of a child nursed at the breast, the breasts of the nurse should be plastered with the pastes of drugs recommended by physicians for the particular malady (instead of giving the drugs to the child), and the child made to suck the same. The use of clarified butter is not beneficial to a child on the first day of an attack of Váta-jvara (fever due to the derangement of the bodily Váyu), within the first two days of an attack of Pittaja fever, and within the first three days of that of Kaphaja fever. But the use of clarified butter may be prescribed for an infant fed on milk and boiled rice, or on boiled rice alone, according to requirements. 30-31.

In case of fever a child should be given no suck at all, lest the symptoms of thirst might develop. Purgatives, Vastis, or emetics are forbidden in the disease of children, unless the disease threatens to take a fatal course. 32.

If the local Váyu aggravated by the waste of brain-materials (Mastulunga), bends down the palate bone of a child attended with an excessive thirst and agony, clarified butter boiled with (the decoction and Kalka of) the drugs of the Madhura Gana, should be used both internally and externally, and the patient should as well be treated with spray of cold water (to stimulate him). The disease in which the navel of a child becomes swollen and painful, is called **Tundi**. It should be remedied by applying fomentations, medicated oils, Upanáhas, etc., possessed of the virtue of subduing the Váyu. A suppuration of the anal region (**Guda-paka**) of a child should be treated with Pittaghna (Pitta-destroying) measures and medicines. Rasánjana used internally and externally (as an unguent) proves very efficacious in these cases. 33-35.



Infantile Elixirs :—Clarified butter cooked with (the decoction and Kalka of) white mustard seeds, *Vachá*, *Mánsi*, *Payasyá*, *Apámarga*, *S'atávári*, *Sárivá*, *Bráhmí*, *Pippalí*, *Haridrá*, *Kushtha* and *Saindhava* salt should be given to an infant fed exclusively on milk. Clarified butter prepared with (the decoction and Kalka of) *Madhuka* (*Yashtimadhu*), *Vacha*, *Chitraka*, *Pippalí* and *Triphalá* should be given to an infant fed both on milk and (boiled) rice (solid and liquid food). Clarified butter boiled with (the decoction and Kalka of) *Daśamula*, milk, *Tagara*, *Bhadrádáru*, *Maricha*, honey, *Vidanga*, *Drákshá* and the two sorts of *Bráhmis* should be given to an infant fed on (boiled) rice (solid food) By these the health, strength, intellect and longevity of the child is improved. 36-37.

A child should be so handled or lifted as not to cause any discomfort. A baby should not be scolded, nor suddenly roused up (from sleep), lest it might get awfully frightened. It should not be suddenly drawn up nor suddenly laid down, lest this should result in the derangement of its bodily *Váyu*. An attempt to seat it (before it has learnt to sit steadily), may lead to haunch-back (*Kyphosis*). Lovingly should a child be fondled and amused with toys and play-things. A child unruffled by any of the above ways becomes healthy, cheerful and intelligent as it grows older. An infant should be guarded against any exposure to the rains, the sun, or the glare of lightning. He should not be placed under a tree or a creeper, in low lands, and in lonely houses or in their shades (caves); and it should be protected from the malignant influences of evil stars and occult powers. 38.

Metrical Texts :—A child should not be left (alone) in an unclean and unholy place, nor under the sky



(uncovered place), nor over an undulating ground, nor should it be exposed to heat, storm, rain, dust, smoke and water. Milk is congenial to the organism of a child, *i.e.*, it is its proper food. Hence in the absence of sufficient breast-milk, the child should be given the milk of a cow or of a she-goat in adequate quantities. 39.

In the sixth month of its birth the child should be fed on light and wholesome boiled rice. A child should always be kept in an inner apartment of the house, and religious rites should be performed on its behalf for the propitiation of evil deities, and it should be carefully guarded against the influences of evil stars. 40.

Symptoms when a malignant star, etc., strikes :—The child looks frightened and agitated, cries, becomes unconscious at times, wounds himself or its nurse with its teeth and finger-nails, gnashes its teeth, crooks, yawns, or moves its eye-brows with upturned eyes, vomits frothy matter, bites its lips, becomes cross, passes loose stool mixed with shreds of mucus, cries in an agonised voice, becomes dull in complexion, becomes weak, does not sleep in the night, does not suck the breast as before, or emits a fishy, bug-like or mole-like smell from its body—these are the general symptoms exhibited by a child under the influence of a malignant star or planet which will be specifically described later on in the Uttara-Tantra. 41.

✓ **Education and Marriage :—**The education of a child should be commenced at a suitable age and with subjects proper to the particular social Varna or order it belongs to. On attaining the twenty-fifth year he should marry a girl of twelve. A conformity to these rules, is sure to crown him with health, satisfaction, progeny and a capacity for fully discharging the religious rites and paying off his parental debts. 42.



Metrical Texts :—An offspring of a girl below the age of **sixteen** by a man below **twenty-five** is usually found to die in the womb. Such a child, in the event of its being born alive, dies a premature death or else becomes weak in organs (Indriyas). Hence a girl of extremely tender age should not be fecundated at all. An extremely old woman, or one suffering from a chronic affection (of the generative organ), or afflicted with any other disease, should not be likewise impregnated. A man with similar disabilities should be held likewise unfit. 40-44.

A foetus, on the point of being miscarried on account of the above-mentioned causes, produces pain in the uterus, bladder, waist (Kati), and the inguinal regions (Vamkshana) and bleeding. In such a case, the patient should be treated with cold baths, sprays of cold water and medicated plaster (Pradeha) &c., at the time, and milk * boiled with drugs constituting the *Jivaniya* group, should be given to her for drink. In case of unusual movements of the foetus in the womb, the enciente should be given a drink of milk boiled with the drugs of *Utpaládi Gana*, for soothing and making it steady in its place. 45.

A foetus being displaced from its normal position produces the following symptoms, viz, pain or spasms in the back and the sides (Párs'va), burning sensation, excessive discharge of blood and retention of urine and fœces. A foetus changing place or shifting from one place to another, swells up the abdomen (Koshtha). Cooling and soothing measures should be adopted in such cases. 46.

* Jivaniya drugs two Tolás, milk sixteen Tolás and water sixty-four Tolás, to be boiled and reduced to sixteen Tolás, i.e., to weight of the milk.

**Medical Treatment :—**

In a case of pain under the circumstances, the enciente should be made to drink a potion consisting of milk boiled with *Mahā-saha*, *Kshudrasahā*, *Madhuka* flower, *S'vadanstrā* and *Kantakāri*, mixed with sugar and honey. In the case of retention of urine, the patient should be made to drink a potion of milk boiled with drugs known as the *Dāruādī Gana* (mixed with sugar and honey). In the case of A'nāha (retention of stool attended with distention of the abdomen), a potion consisting of milk boiled with asafetida, *Sauvarchala* salt, garlic and *Vacha* (mixed with honey and sugar) should be given. In cases of excessive bleeding, linctus made of the powdered chamber of a *Koshthágáriká* insect*, *Samangá*, *Dhātaki* flowers, *Navamāliká*, *Gairika*, resin and *Rasán-jana*, or of as many of them as would be available, mixed with honey, should be licked. In the alternative, the bark and sprouts of the drugs known as the *Nyagrodhádi Gana* mixed with boiled milk should be administered, or a *Kalka* of the drugs of the *Utpaládi* group mixed with boiled milk should be used, or a *Kalka* of *S'áluka*, *S'ringátaka* and *Kas'eru* mixed with boiled milk should be given. As a further alternative, the enciente may be made to eat cakes made of powdered *Sáli* rice with the decoction of *Udumbara* fruit and *Audaka-kanda*, mixed with honey and sugar. A piece of linen or a plug soaked in the expressed juice of the drugs of the *Nyagrodhádi* group should be inserted into the passage of the vagina. 47.

In a case of pain unattended with bleeding, the enciente should be made to drink a potion composed of milk-boiled with *Madhuka* (*Yashtimadhu*), *Devaddru* and

* There is a kind of insect which makes its chamber with earth generally under the ceiling or on the walls. This earth should be used.

Payasyá ; or with *As'mantaka*, *Satávári* and *Payasyá* ; or with the drugs of the group of *Vidárigandhádi* Gaṇa ; or with *Vrihāti*, *Kantakári*, *Utpala*, *S'atávári*, *Sárivá*, *Payasyá* and *Madhuka* (*Yashtimadhu*). These remedies speedily applied tend to alleviate the pain and make the foetus steady in the womb. 48.

After the foetus has been steadied by the aforesaid measures, a diet consisting of (boiled rice and) cow's milk, boiled with the dried tender fruits of *Udumvara*, should be prescribed for the patient. In the event of **miscarriage**, the patient should be made to drink a *Yavágu* (gruel) of the *Uddáḍlaka* rice, &c., cooked with the decoction of the *Páchaniya* group (*Pippalyádi*) and devoid of all saline and fatty matter, for a number of days corresponding to that of the month of gestation. Old treacle mixed with the powdered drugs of the *Dipaniya* group (*Pancha-kola*), or simply some *Arishta* (*Abhayárishta*, etc.), should be given, in the event of there being pain in the pelvis, bladder and abdomen. 49.

The internal ducts and channels (*Srotas*) stuffed with aggravated *Váyu* lead to the weakening (*Laya*) of the foetus and, if the state continues, it leads even to its death. Hence the case should be treated with mild anointing measures, etc., (*Sneha-karma*, etc.,) and gruels made of the flesh of the birds of the *Utkros'a* species and mixed with a sufficient quantity of clarified butter, should be given to her. As an alternative, *Kulmáša* * boiled with *Máša*, sesamum and pieces of dried (tender) *Vilva* fruit should be given her, after which she should be made to drink, for a week, honey and *Máddhvika* (a kind of weak wine). At the non-delivery of the child

* "*Kulmáša*" may mean either *Kulattha* pulse or half boiled wheat, barley, etc.



even after the lapse of the full term of gestation, the enciente should be made to thrash corn with a pestle in an Udukhalā or mortar (husking apparatus) or should be made to sit or move (on legs or by conveyance), on an uneven ground. 50.

Atrophy of a foetus in the womb should be ascribed to the action of the deranged Vāyu. This is detected by the comparatively lesser fulness of the abdomen of the enciente and slow movement of the foetus in the womb. In such a case, the enciente should be treated with milk, with the Vrimhaniya (of restorative and constructive properties) drugs, and with meat-soup.* 51.

A combination of ovum and semen affected by the deranged Vāyu in the womb, may not give rise to a successful fecundation (living impregnated matter), but leads to a distention of the abdomen (as in pregnancy), which again, at any time, may disappear of itself. And this is ascribed by the ignorant to the malignant influence of Naigamesha (spirits). Such an impregnated matter, sometimes lying concealed in the uterus, is called Nāgodara, which should be treated with the remedies laid down under the head of Lina-Garbha (weak foetus). 52.

Now we shall discourse on the management of pregnancy according to the months (period) of gestation.

Metrical Texts:—The following receipes, such as, (1) Madhuka (Yashtimadhu), S'ākavija, Payasyā, and Devadāru; (2) As'mantaka, black sesamum, pippali, Manjishthā, Tāmra-valli and Śatāvāri; (3) Vrikshādani, Payasyā, Latā (Durvā), Utpala and Śārivā; (4) Anantā, Śārivā, Rāsnā, Padma, and Madhuka (Yashtimadhu);

* The particle "cha" in the text signifies the use of any other constructive tonic,



(5) Vrihati, Kankarí, Kásmari, sprouts (Śunga) and barks of milk-exuding trees (as, Vata, etc.), and clarified butter†; (6) Príni-parí, Valá, Śígru, Śvadanshtrá and Madhuparniká; and (7) Śring'taka, Visa (stalks of lotus), Drákshá, Kaśaru, Madhuka (Yashtimadhu), and sugar; should successively be given with milk* to an enciente, from the first to the seventh month of her gestation, in the case of a threatened miscarriage or abortion. 53.

An enciente should be made to drink milk boiled with the roots of Kapittha, Vrihati, Vilva, Patola, Ikshu and Kankarí, (in case of impending or threatened miscarriage) in the eighth month of her pregnancy. In the ninth month (and under similar conditions), the potion should be made up of Madhuka (Yashtimadhu), Ananta-mula, Payashá and Śarivá. In the tenth month (and under similar conditions), a potion consisting of milk boiled with Sunthi and Payasyá is beneficial, or, in the alternative, may be given a potion made up of milk with Sunthi, Madhuka (Liquorice) and Devadáru. The severe pain would vanish and the foetus would continue to develop safely in the womb, under the aforesaid mode of treatment. 54-57.

A child born of a woman, who had remained sterile (not-conceived) for a period of six years (Nivritta-prasavá)* after a previous child-birth, becomes a short-lived one. 58.

* Chakradatta reads "Visam" (stalks of lotus) instead of "Ghritam" (clarified butter).

† If a conception does not occur in a woman for a period of more than five years after a child-birth, she is called **Nivritta-prasavá**.

* Sivadása also says that powders of these drugs should be given with boiled milk, but he adds that some authorities recommend these drugs to be boiled in milk according to Kshira-páka-vidhi.



Application of mild emetic medicines, (though forbidden in the case of a pregnant woman), may be resorted to, in the case of a fatal disease, (even in that stage). A diet consisting of sweet and acid things should be prescribed for her, so as to bring the deranged Doshas to the normal state ; mild Samsāmaniya (soothing and pacifying) medicines should be applied and food and drink consisting of articles mild in their potency, predominantly sweet-tasting and not injurious to the foetus, should be advised and mild (external) measures not baneful to the foetus should be resorted to, according to the requirements of the case. 59.

Memorable Verses :—The growth, memory, strength and intellect of a child are improved by the use of the four following medicinal compounds, used as linctus (Prās'a), viz., (1) well-powdered gold, Kushtha, honey, clarified butter and Vacha ; (2) Matsyākshaka* (Brāhmi), Śankha-puspi, powdered gold, clarified butter and honey ; (3) Arkapuspi, honey, clarified butter powdered gold and Vacha ; and (4) powdered gold, Kaitaryyah (Mahā-Nimba), white Durbā,† clarified butter and honey. 60.

Thus ends the tenth Chapter of the Śārira Sthānam in the Susruta Samhitā, which treats of the nursing and management etc. of pregnant women.

* Some, however, explain Matsyākshaka to be *Dhustura*; others again say it is a kind of red-flowered shrub grown in the Ānupa country.

† The word "Śiveta," in the Text, may either be adjective to "Durvā" and mean "white" or it may mean white Vacha or white Aparajitā or white Durvā.

Here ends the Śārira Sthānam.



THE
SUSRUTA SAMHITA
CHIKITSÀ-STHÀNAM.
(SECTION OF THERAPEUTICS).

CHAPTER I.

Now we shall discourse on the medical treatment of the two kinds of inflamed ulcers (**Dvivraniya Chikitsitam**). I.

Ulcers may be grouped under two heads according as they are **Idiopathic** or **Traumatic** in their origin. The first group includes within its boundary all ulcers that are caused through the vitiated condition of the blood or the several deranged conditions of the Váyu, Pitta and Kapha, or are due to their concerted action (Sannipáta), while the second group embraces those which are caused by the bites of men, beasts, birds, ferocious animals, reptiles or lizards, or by a fall, pressure and blow, or by fire, alkali, poison, or irritant drugs, or through injuries inflicted by pointed wood, skeletal bones*, horns, discus, arrows, axes, tridents, or *Kuntas* (a kind of shovel), or such other weapons. Although both these classes of ulcers possess many features in common, they have been grouped under two distinct heads on account of the diversity of their origin, the difference in remedial measures to be adopted in their treatment, and the variation in their

* Fragments of broken pottery.—Dallana.



strength and tenacity. Hence the chapter is called **Dvivraniya**. 2.

In all cases of **traumatic ulcers**, cooling measures should be at once resorted to, just after (the fall or blow or stroke), for the cooling of the expanding (radiating) heat of the incidenta' ulcer, in the manner laid down in respect of (the pacification of enraged) Pitta, and a compound of honey and clarified butter should be applied on the wounded locality for the adhesion (**Sandhāna**) of the lacerated parts, [and for the pacification, i.e., restoration to normal state, of the local blood and **Vāyu** aggravated through an obstruction of their passage]. Hence arises the necessity of making the two-fold classification of ulcers. After that (a week) a traumatic ulcer should be treated as an idiopathic one (to all intents and purposes), inasmuch as it is found to be associated with deranged **Vāyu**, Pitta or Kapha. Hence at that stage the medical treatment of both the forms of ulcer is (practically) the same. 3.

In short, ulcers are further subdivided (particularly) into fifteen groups, according to the presence of the morbid diathesis (deranged **Vāyu**, Pitta Kapha and blood therein), either severally or in combinations as described (before) in the Chapter on **Vrana-Praśna** (Sutra Sthānam. Ch. XXI). Several authorities, by adding the simple uncomplicated ulcers (unassociated with any of the morbid principles of the deranged **Vāyu**, Pitta, &c.) to the list, hold the number of types to be sixteen. (Practically they are innumerable, according to the combinations made of the deranged **Vāyu**, etc. and the different **Dhātus** of the system). 4.

Symptoms of ulcer may be divided into two kinds *vis.*, **General** and **Specific**. Pain is the general characteristic

(of all forms of ulcer), while the symptoms, which are exhibited in each case according to the virtue of the deranged Vāyu, Pitta, etc, involved therein, are called the Specific ones. A **Vrana** is so named from its etymology (the term being derived from the root Vrana—to break) and signifies a cracked or broken condition (of the skin and flesh of the afflicted part) of the body. 5.

The Vātaja-Ulcer :—The ulcer assumes a brown or vermilion colour and exudes a thin, slimy and cold secretion, largely attended with tension, throbbing and a sort of pricking and piercing pain (in its inside), which seems as if being expanded and extended. This type of ulcer does not extend much and is characterised by a complete destruction of the tissue (flesh). **The Pittaja ulcer** is rapid in its growth. It assumes a bluish yellow colour, exudes a hot secretion resembling the washings of Kimsūka flowers, and is attended with burning, suppuration and redness, being surrounded with eruptions of small yellow-coloured pustules. **The Kaphaja ulcer** is found to be extended and raised around its margin and is accompanied by an irresistible itching sensation. It is thick and compact (in its depth), covered with a large number of vessels and membranous tissues (Śirā-snāyu-jāla), grey in colour, slightly painful, hard and heavy, and exudes a thick, cold, white and slimy secretion. **The Raktaja ulcer** (resulting from a vitiated condition of the blood) looks like a lump of red coral. It is often found to be surrounded by black vesicles and pustules and to smell like a strong alkali. It becomes painful and produces a sensation, as if fumes were escaping out (of it). Bleeding (is present) and the specific symptoms of the Pittaja type are likewise found to supervene. 6—9.



The Vāta-Pittaja Type :—An ulcer due to the concerted action of the deranged Vāyu and Pitta is marked by a pricking and burning pain and a red or vermilion colour. A sensation of fumes arising out of it (is also felt) and the ulcer exudes a secretion which partakes of the characteristic colours of both the deranged Vāyu and Pitta. An itching and piercing pain is felt in the ulcer due to the combined action of the deranged Vāyu and Kapha (**Kapha-Vātajaja type**), which becomes heavy and indurated, constantly discharging a cold, slimy secretion. An ulcer resulting from the deranged condition of the Pitta and Kapha (**Kapha-Pittaja type**) becomes heavy, hot and yellow. It is marked by a burning sensation and exudes a pale, yellow-coloured secretion. An ulcer marked by the aggravated condition of the deranged Vāyu and blood (**Vāta-Raktaja type**) is dry and thin and is largely attended with a piercing pain and anæsthesia. It exudes blood or a vermil-coloured secretion and is marked by the combined hues respectively peculiar to the deranged Vāyu and blood. An ulcer due to the combined action of the deranged Pitta and blood (**Rakta-Pittaja type**) is marked by a colour which resembles the surface cream of clarified butter. It smells like the washing of fish, is soft, spreading (erysipelatous), and secretes a hot blackish matter. An ulcer due to the combined action of the deranged Kapha and blood (**Kapha-Raktaja type**) is red-coloured, heavy, slimy, glossy and indurated. It is usually marked by itching and exudes a yellowish bloody secretion. An ulcer due to the concerted action of the deranged Vāyu, Pitta and blood (**Vāta-Pitta-Raktaja type**) is marked by a sort of throbbing, pricking and burning pain. It discharges a flow of thin yellowish

blood and produces a sensation, as if fumes were escaping (out of its cavity). An ulcer due to the concerted action of the deranged Vāyu, Kapha and blood (**Vāta-Sleshma-Raktaja type**) is usually attended with itching, throbbing and tingling sensations and thick, grey, blood-streaked discharge. An ulcer associated with the deranged Kapha, Pitta, and blood (**Kapha-Pitta-Raktaja type**) is largely attended with redness, itching, suppuration and burning sensation. It emits a thick, greyish, bloody secretion. An ulcer marked by the concerted action of the deranged Vāyu, Pitta and Kapha (**Sānnipātika**) is attended with diverse kinds of pain, secretion, colour, &c., peculiar to each of these types. An ulcer associated with the combined action of the deranged Vāyu, Pitta, Kapha and blood (**Vāta-Pitta-Kapha-Raktaja type**) is attended with a sensation, as if it were being burnt and lacerated. It is largely accompanied by throbbing, itching sensation, a sort of pricking and burning pain, with complete anæsthesia in the locality; redness, suppuration, various other kinds of colour, pain and secretion are its further characteristics. 10—20.

An ulcer (**Vrana**) which is of the same colour with the back of the tongue, soft, glossy, smooth, painless, well-shaped and marked by the absence of any kind of secretion whatsoever, is called a clean ulcer (**Suddha-Vrana**). 21.

Therapeutics :—The medical (and surgical) treatment of a **Vrana** (ulcer) admits of being divided into sixty * different factors, such as,—Apatarpana (fasting or low diet), Ālepa (plastering), Parisheka (irrigating or spraying), Abhyanga (anointing), Sveda

* **N.B.** Authorities, however, differ in enumerating these factors, although every one of them sticks to the total number of sixty.



(fomentations, etc.), Vimlāpana (resolution by massage or rubbing), Upanāha (poultice), Pāchana (inducing suppuration), Visrávana (evacuating or draining), Sneha (internal use of medicated oils, ghrita, etc.), Vamana (emetics), Virechana (purgatives), Chhedana (excision), Bhedana (opening—e.g., of an abscess), Dārana (bursting by medicinal applications), Lekhana (scraping), Āharana (extraction), Eshana (probing), Vyadhana (puncturing—opening a vein), Vidrávana (inducing discharge), Sivana (suturing), Sandhāna (helping re-union or adhesion), Pidana (pressing), Śonitāsthāpana (arrest of bleeding), Nirvápana (cooling application), Utkáriká (massive poultices), Kasháya (washing with decoctions), Varti (lint or plug), Kalka (paste), Ghrita (application of medicated clarified butter), Taila (application of medicated oil), Rasa-kriyá (application of drug-extracts), Avachurnana (dusting with medicinal powders), Vrana-Dhupana (fumigation of an ulcer), Utsádana (raising of the margins or bed of an ulcer), Avasádana (destruction of exuberant granulation), Mridu-Karma (softening), Dárana-Karma (hardening of soft parts), Kshára-Karma (application of caustics), Agni-Karma (cauterization), Krishna-Karma (blackening), Pándu-Karma (making yellow-coloured cicatrices), Pratisárana (rubbing with medicinal powders), Roma-sanjanana (growing of hairs), Lomápaharana (epilation), Vasti-karma (application of enemas), Uttara-Vasti-karma (urethral and vaginal injections), Vandha (bandaging), Patradána (application of certain leaves—vide *Infra*), Krimighna (Vermifugal measures), Vrimhana (application of restorative tonics), Vishaghna (disinfectant or anti-poisonous applications), Siro-virechana (errhines), Nasya (snuff), Kavala-dhárana (holding in the mouth of certain drug-masses for diseases of the oral cavity or gargling), Dhuma (smoking

of vapouring), Madhu-sarpib (honey and clarified butter), Yantra (mechanical contrivances, e g., pulleys, &c.), Āhāra (diet) and Rakshā-Vidhāna (protection from the influence of malicious spirits). 22.

Of these, Kashāya, Varti, Kalka, Ghrita, Taila, Rasa-kriyā and Avachurnana are the measures for the cleansing (Śodhana) of an ulcer and for helping its granulation (Ropana). The eight acts (from Chhedana to Sivana) are surgical operations. We have already spoken of such acts as Śonitāsthāpana, Kshāra-karma, Agni-karma, Yantra, Āhāra, Rakshā-vidhāna and Vandha-Vidhāna (in the Sutra-sthāna). Later on, we shall discourse on Sneha, Sveda, Vamana, Virechana, Vasti, Uttara-vasti, Śiro-virechana, Nasya, Dhuma, and Kavala-dhārana. Of the remaining measures we shall speak in the present chapter. 23.

There are six kinds of swellings (Śophas), as described before, and the following eleven measures, commencing with Apatarpana and ending in Virechana, should be regarded as their cure. These are the proper remedies for a swelling and do not (cease to be efficacious in, nor) prove hostile to cases of swelling which are transformed into ulcers. The other measures should be deemed as remedial to ulcers but Apatarpana is the first, general and principal remedy in all types of swellings (Śophas). 24.

Memorable Verses :—Apatarpana (fasting) should be prescribed in the case of a patient, full of enraged Doshas, as well as, in one having his organic principles (Dhātus) and refuse matters (Malas) of the system, deranged by them, for the purpose of bringing them to their normal condition, with a regard both to their nature and to the strength, age, &c., of the patient. Persons afflicted with diseases which result

from the up-coursing of the deranged Vāyu (Urdhva-vāta) such as cough, asthma, &c., or with thirst, hunger, dryness of the mouth and fatigue, as well as old men, infants, weak persons, men of timid dispositions and pregnant women should never fast. A swelling and an extremely painful ulcer should be respectively treated with a proper medicated plaster at the very outset. The pain in such a case will yield to the medicinal plaster as a blazing room or house is readily extinguished by means of steady watering. Such plasters not only give comfort to the patient (by removing the pain and leading to the absorption of the swelling), but heaves up the bed of the sore or the ulcer and contributes to its speedy purification and healing up (granulation). 25—28.

In the case of a swelling brought on by the deranged Vāyu, the affected part should be washed or sprinkled (Parisheka) with a warm lotion of clarified butter, oil, Dhānyāmla and essence of meat or with a decoction of the drugs that tend to pacify the enraged Vāyu and to relieve the pain. A swelling due to the action of the deranged **Pitta** or **blood** or to the effect of a blow or poison should be washed or sprinkled with a lotion of milk, clarified butter, honey and sugar dissolved in water, the expressed juice of sugar-cane and a cold decoction of the drugs of the Madhura group (Kākolyādi-gana) and the Kshira-Vrikshas. A **Kaphaja** swelling on the body should be washed or sprinkled with a luke-warm lotion of oil, cow's urine, alkaline solution, wine (Surā), Śukta and with a decoction of drugs that destroy the deranged Kapha. 29—31.

Metrical Text:—As a fire is put out by jets of water, so the fire of the deranged morbid principles (Doshāgni) of the body are speedily subdued and put down by the application of (medicinal lotions) washes. 32.



An anointing (Abhyanga), duly prescribed and used with a full regard to the nature of the aggravated Doshas, leads to their pacification (restoration to the normal condition) and to softness (subsidence) of the swelling. 33.

Metrical Texts:—An application of an anointment (Abhyanga) should precede the measures of fomentation, resolution, &c, while it should follow all evacuating measures, &c. A painful, extended and indurated swelling, as well as an ulcer of a similar nature, should be fomented, while an act of Vimlápāna (resolution by gentle massage) should be done in respect of a fixed or unfluctuating swelling attended with little or no pain whatsoever. A wise physician should first annoint and foment the part and then gently and slowly press it with a bamboo-reed or with the back of his thumb or palm. A non-suppurated swelling or one that is partially suppurated should be treated with poultice (Upanāha), which would lead to its resolution or suppuration, as the case might be. A swelling, not resolved or not subsiding even after the adoption of the measures beginning with Apatarpana and ending in Virechana (in the given list), should be caused to suppurate with the drugs enumerated in the chapter of Miśraka, such as curd, whey, wine (Surá), Śukta and Dhányāmla (a kind of fermented paddy gruel). They should be formed into a paste and the paste should be cooked into an efficacious poultice-like composition (Utkáriká), and mixed with salt and oil or clarified butter, it should be applied over the affected part (swelling) and bandaged with the leaves of an Eranda plant. The patient should be allowed to take a wholesome (*i.e.*, which does not produce Kapha) diet as soon as suppuration would set in (in the swelling). 34-39.

**Blood-letting :**

—Blood-letting should be resorted to in a case of newly formed swelling for its resolution and for alleviating the pain. Bleeding (**Visrávana**) is recommended in the case of an ulcer which is indurated, marked by a considerable swelling and inflammation and is reddish black or red-coloured, extremely painful, gagged in its shape and considerably extended at its base (congested), specially in the case of a poisonous ulcer, for the subsidence of the pain and for warding off a process of suppuration therein, either by applying leeches or by opening (a vein in the locality) by means of an instrument. An ulcer-patient of a dry or parched temperament affected with distressing supervenients or ulcer-cachixia or who is weak should be made to drink an emulsive potion cooked with (a decoction of) appropriate drugs. A patient afflicted with an ulcer with an elevated margin and attended with swelling and specially marked by the presence of the deranged Kapha and by a flow of blackish red blood should be treated with emetics. Ulcer-experts recommend purgatives to a patient afflicted with an old or long-standing ulcer, attended with a deranged condition of the Váyu and Pitta. An **excision** should be made into an ulcer which refuses to suppurate and which is of a hard and indurated character attended with sloughing of the local nerves and ligaments (**Snáyu**). An **opening** or excision (**Bhedana**) should be made into an ulcer (**Vrana**) in the inside of which pus has accumulated and makes it heave up and which not finding any outlet consequently eats into the underlying tissues and makes fissures and cavities. 40-46.

Measures which contribute to a spontaneous bursting by medicinal applications (**Dávana**) of a swelling should be adopted in the case of an infant or an old or enfeebled

patient, or of one incapable of bearing the pain (of a surgical operation), or of a person of a timid disposition, as well as in the case of a woman, and in the case of swellings which appear on the vulnerable parts (Marmas) of the body. Remedies which lead to the spontaneous bursting of a swelling should be applied by a wise physician to a well-suppurated swelling drawn up and with all its pus gathered to a head; or an alkaline substance should be applied on its surface and a bursting should be effected when the Doshas are found to be just aggravated by the incarcerated pus. 47.

An ulcer which is indurated, whose edges are thick and rounded, which has been repeatedly burst open, and the flesh of whose cavity is hard and elevated, should be scarified by a surgeon; or, in other words, an indurated ulcer should be deeply scarified, one with thick and rounded edges should be excessively scarified, while the one which has been repeatedly burst open should be entirely scraped off. An ulcer with a hard and elevated bed should be scraped evenly and longitudinally along the length of its cavity. In the absence of a scarifying instrument, the act should be performed with a piece of Kshauma (cloth made of the fibres of an Atasi plant), a linen (Plota) or a cotton pad (Pichu), or with such alkaline substances as nitrate of potash, Samudra-phena, rock-salt, or rough leaves of trees (e. g., those of Udumbara, &c.). 48.

The cavities or courses of a sinus, or of an ulcer which had any foreign matter lying imbedded in its inside, or which takes a crooked or round about direction, as well as of the one formed into cavities within its interior, should

* This scraping off of the ulcer should be done by an instrument of Surgery and not by any rough leaf or the like, mentioned hereafter.



Be probed by gently introducing the tender fibres of bamboo sprouts (Karira), a (lock of) hair, a finger, or an indicator into its inside. The course of a sinus occurring about the anus or in the region of the eyes (Netra-Vartma) should be probed with the slender fibres of Chuchchu, Upodiká, or Karira, in the event of their mouths being narrow and attended with bleeding. The Salya (incarcerated pus, etc.) should be extricated, whether the mouth of the sinus is constricted or otherwise, in conformity with the directions laid down before on that behalf. In diseases amenable to acts of puncturing (Vyadhana), the knife should be inserted into the seat of the disease to a proper depth and extent, to be determined by its situation in the body, and the Doshas (pus, etc.) should be let out, as stated before. Ulcers with a wide mouth, unattended with any symptoms of suppuration, and occurring in a fleshy part of the body, should be sutured up, and the adhesion (Sandhána) of the edges should likewise be effected, as directed before. A plaster composed of drugs (capable of drawing out and secreting the pus), as described before, should be applied around the mouth of an ulcer seated in any of the Marmas (vulnerable parts), or full of pus in its inside, with a narrow-mouthed aperture. The plaster should be removed when dry, and should not be applied on the orifice of the ulcer, as it would, in that case, interfere with the spontaneous secretion of pus (Dosha). 49-54.

An excessive hæmorrhage incidental to such acts, as excessive hurting of the vein, etc., should be arrested with suitable styptic* measures and remedies (Śonitasthāpana).

* Styptic measures are of four kinds—Sandhāna, Skandana, Pāchana, and Dāhana. See Sutra-Sthānam, Chap. XIV.

An ulcer attended with fever, suppuration and burning sensation due to the excited state of the deranged Pitta and congestion of blood should be allayed (Nirvāpana—literally putting out) with suitable and proper medicinal remedies. It should be allayed with compounds made up of the proper cooling drugs (of the Miśraka chapter), pasted with milk and lubricated with clarified butter. Cooling plasters (Lepa) should then be applied as well. 55-56.

An ulcer whose flesh is eaten away, which discharges a thin secretion, or is non-suppurating in its character, and is marked by roughness, hardness, shivering and the presence of an aching and piercing pain, should be fomented with a poultice-like efficacious preparation (**Utkārikā**) cooked with the drugs of Vāyu-subduing properties, those included within the Amla-varga, and those which belong to the Kākolyādi group, and with the oily seeds (such as linseed, sesamum, mustard, castor, etc.). An indurated, painful, fætid, moist and slimy ulcer should be washed with a disinfectant or purifying lotion consisting of a decoction of the drugs mentioned before for the purpose. 57-58.

Plugs or lints plastered with a paste of the purifying drugs (enumerated before) should be inserted into an ulcer with any foreign matter (e.g., pus) lying embedded in it, or into one with a deep but narrow opening, or into one situated in a fleshy part of the body. An ulcer full of putrid flesh and marked by the action of the highly deranged Doshas (Vāyu and Kapha) should be purified with a paste of the aforesaid available drugs making up the plug. An ulcer of a Pittaja origin, which is deep-seated and attended with a burning sensation and with suppuration, should be purified with the application of a medicated clarified butter, prepared with the purifying



drugs with an admixture of Kárpása-phala*. An intelligent Surgeon should purify an ulcer with raised flesh, and which is dry and is attended with scanty secretion with an application of medicated mustard oil. An indurated ulcer, refusing to be purified with the foregoing medicated oils, should be purified with a duly prepared decoction of the drugs enumerated before (Sutra. chap. 38,—the Śálasárádi group) and prepared in the following manner of **Rasa-kriyá**. A decoction of the said drugs duly prepared should be saturated with an after-throw of *Haritála*, *Manahs'ilá*, *Kásisa* and *Sauráshtra* earth, and well compounded together; the preparation should also be mixed with the expressed juice of *Mátulunga* and with honey. The medicine thus prepared should be applied to the ulcer on every third or fourth day. 59.

Deep† and foul-smelling ulcers covered with layers of deranged fat (phlegmonous ulcer) should be purified by the learned physician with the powders of the drugs with which the purifying plug or the lint has been enjoined to be plastered (*Ajagandhá*, &c.). Decoctions of the drugs which are possessed of the virtue of setting in a process of granulation (**Ropana**) in an ulcer, such as *Vatá*, &c., as stated before, should be used by a surgeon (*Vaidya*) after it had been found to have been thoroughly purified. Medicated plugs, composed of drugs possessing healing properties (such as, *Soma*, *Amritá*, *As'vagandhá*, etc.) should be inserted in deep-seated ulcers, when cleansed and unattended with pain. 60-62.

* The total weight of the purifying drugs should be equal to that of the Kárpása-phala alone and they should be boiled together with four times their quantity of clarified butter and with sixteen times of water.

† There is a different reading of "Agambhira" in place of "Gabhira," but Gayi thinks the emendation undesirable.

A Kalka or a levigated paste of sesamum and honey (mentioned in the *Miśraka* Chapter) should be applied for the purpose of healing up an ulcer situated in a muscular part from which all putrid flesh has been removed or sloughed off and which exhibited a clear cavity. This paste (of sesamum) tends to allay the deranged *Váyu* through its sweet taste, oleaginousness and heat-making potency; subdues the deranged *Pitta* through its astringent, sweet and bitter taste and proves beneficial even in the case of the deranged *Kapha* through its heat-producing potency and bitter and astringent taste. An application of the levigated paste of sesamum mixed with the drugs of purifying and healing properties tends to purify and heal up an ulcer. An application of the levigated paste of sesamum mixed with honey and *Nimba*-leaves leads to the purification of sores; whereas an application of the same paste (*i.e.*, sesamum, honey and leaves of *Nimba*), mixed with clarified butter tends to heal up the ulcer. Several authorities attribute the same virtue to a barley-paste.* Levigated pastes of barley and of sesamum (or a paste of barley mixed with sesamum) contribute to the resolution, or subsidence of a non-suppurated swelling, fully suppurate one which is partially suppurated, lead to the spontaneous bursting of a fully suppurated one, and purify as well as heal up one that has already burst out. 63-65.

An ulcer, which is due to the effects of poison, vitiated blood, or aggravated *Pitta*, and which is deep-seated or is of traumatic origin, should be healed up with a medicated clarified butter prepared with the drugs of healing virtues (*Ropaniya*—enumerated before) and milk. An ulcer marked by an aggravated condition of the deranged

* *Jejjada* and *Gayadāsa* interpret the term to mean "barley-paste mixed with sesamum."



Váyu and Kapha should be healed up with the application of an oil, boiled and prepared with the proper purifying drugs mentioned before. 66 67.

Rasa-kriyá* with the two kinds of *Haridrā* should be resorted to for the purpose of healing up an ulcer, in which bandaging is forbidden (such as those due to the deranged Pitta or blood, or to blow, &c., or to the effects of poison), and an ulcer appearing on the moveable joints, which, though exhibiting all the features of a well-cleansed sore, has not been marked by any process of healthy granulation†. Healing medicinal powders should be used in the case of an ulcer which is confined to the skin, and is firm-fleshed and marked by the absence of any irregularity in its shape (*i.e.*, not uneven in its margin). The mode of applying medicinal powders, as stated in the Sutra-sthána, should be adopted in the present instance. 68-69.

The healing and purifying measures described above should be deemed equally applicable to, and efficacious in cases of ulcers in general with regard to their Doshas (both idiopathic and traumatic). The success of these measures has been witnessed in thousands of cases and has been recorded in the Śástras (authorised works on medicine). Hence they should be used as incantations without any doubt as to their tested and infallible efficacy. An intelligent physician should employ the drugs, mentioned before, in any of the seven forms (either in the shape of a decoction, or a

* The decoction of *Triphalā* and the drugs of the Nyagrodhádi group should be duly prepared, filtered and then condensed to the consistency of treacle. Powders of *Haridrā* and *Dáru-haridrā* should be then thrown into it. In the end, the whole preparation should be well-stirred, mixed with honey and applied. This is what is called **Rasa-kriyá**.

† Several editions read "though cleansed yet ungranulating ulcers."



plug, or a paste, or through the medium of medicated oils and clarified butter, or in the shape of Rasa-kriyá, or as powders), according to the requirements of each case. 70.

The drugs which constitute the two groups of Panchamulas (major and minor), as well as those of the Váyu-subduing group, should be employed in the case of an ulcer due to the aggravated Váyu in any of the seven forms—decoction, etc. Similarly the drugs which are included within the groups of Nyagrodhádi or Kákolyádi should be used in any of those seven forms, in the case of an ulcer due to the aggravated Pitta (for the purification and healing thereof). Drugs which form the group of Áragvadhádi, as well as those which have been described as heat-making in their potency, should be used in any of those seven aforesaid forms, in the case of an ulcer due to the deranged Kapha. The drugs of two or three of those groups, should be combinedly used in any of those seven forms, in connection with an ulcer marked by the aggravated condition of any two or three of the deranged Doshas respectively. 71-74.

Fumigation :—Vátaja ulcers with severe pain and secretion should be fumigated with the fumes of *Kshauma*, barley, clarified butter and other proper fumigating substances [such as turpentine and resin (gum of *Śála* tree)]. 75.

Utsádana-Kriyá (Elevation) :—Medicated plasters (consisting of *Apámarga*, *As'vagandhá*, etc.) and medicated clarified butter (prepared with the same drugs should be used in ulcers (due to the aggravated Váyu and marked by the absence of any secretion, and affecting a considerably smaller area or depth of flesh, as well as in those (due to the deranged and aggravated Pitta and) seated deep into the flesh, for the purpose of raising up (filling up) the beds or cavities thereof. Meat of carni-



vorous animals should be taken in the proper manner by the patient, inasmuch as meat properly partaken of in a calm and joyful frame of mind adds to the bodily flesh of its partaker. 76.

Avasádana (destruction of super-growths):— Proper drugs or articles (such as sulphate of copper, etc.) powdered and pasted with honey should be applied for destroying the soft marginal growths of an ulcer found to be more elevated than the surrounding surface of the affected locality. 77.

Mridu-Karma (softening):—In respect of indurated and fleshless (not seated in a part of the body where flesh abounds) ulcers marked by a deranged condition of Váyu, softening measures (with the help of repeated applications of lotions and plasters composed of sweet and demulcent substances mixed with salt in a tepid or luke-warm state) and blood-letting* should be resorted to. Sprinkling (Seka) and application of clarified butter or oil prepared with the Váyu-subduing drugs should also be resorted to. 78.

Dárúna-karma:—The employment of hardening measures (Dárúna-karma) is efficacious in connection with soft ulcers and in the following manner. Barks of *Dhava*, *Priyangu*, *As'oka*, *Rohini*, *Triphalá*, *Dhátaki* flowers, *Lodhra* and *Sarjarasa*, taken in equal parts and pounded into fine powders, should be strewn over the ulcer, i.e., the ulcer should be dusted with the same. 79.

Kshára-Karma (Potential cauterization):— The measure of applying alkali should be adopted for the

* Blood-letting should be resorted to in the event of any vitiated blood being found to have been involved in the case; but in the event of a similar participation of any deranged Kapha, oils and lotions composed of the Váyu-destroying drugs should be made use of.

purification of the sore of a long-standing ulcer which is of an indurated character with its margin raised higher (than the surrounding skin), and is marked by itching and a stubborn resistance to all purifying medicines. 80.

Agni-Karma (actual cauterization) :—An ulcer incidental to an act of lithotomic operation allowing the urine to dribble out through its fissure, or one marked by excessive bleeding, or in which the connecting ends have been completely severed, should be actually cauterised with fire. 81.

Krishna-Karma :—The blackening of a white cicatrix, which is the result of a bad or defective granulation, should be made (after the complete healing up of the ulcer) in the following manner. Several *Bhallátaka* seeds should be first soaked in the urine of a cow (and then dried in the sun, this process should be repeated for seven days consecutively), after which they should be kept (a week) immersed in a pitcher full of milk. After that the seeds should be cut into two and placed in an iron pitcher. Another pitcher should be buried in the ground with a thin and perforated lid placed over its mouth, and the pitcher containing the seeds should be placed upon it with its mouth downward (so that the mouths of the two pitchers might meet), and then the meeting place should be firmly joined (with clay). This being done a cow-dung fire should be lit around the upper pitcher. The oily matter (melted by the heat) and dribbling down from the *Bhallátaka* seeds into the underground pitcher should be slowly and carefully collected. The hoofs of village animals (such as horses, etc.) and those which live in swamps (*Ānupas*—such as buffaloes, etc.) should be burnt and pounded together into extremely fine powder. The oil (of the *Bhallátaka* seeds collected as above) should then be

mixed with this powder, and applied to the white cicatrix. Similarly, the oily essence of the piths of some kinds of wood, as well as of some kinds of fruit (*Phala-sneha*) prepared in the manner of the Bhallátaka oil (and mixed with the powdered ashes of hoofs) should be used for the blackening of a cicatrix. 82-83.

Pándu-karana :—The natural and healthy colour (Pándu) of the surrounding skin should be imparted to a cicatrix which has assumed a black colour owing to the defective or faulty healing up of the sore in the following manner. The fruit of the *Rohini** should be immersed in goat's milk for seven nights and, afterwards finely pasted with the same milk, should be applied to the skin. This measure is called **Pándu-karana** (imparting a yellow or natural skin-colour to the cicatrix). To attain the same result, the powder of a new earthen pot, *Vetasa* roots, *S'ála* roots, Sulphate of iron, and *Madhuka* (Yashti-madhu) pasted together with honey may be used. As an alternative, the hollow rind of the *Kapittha* fruit, from which the pulp has been removed, should be filled with the urine of a goat together with Kásisa (Sulphate of iron), *Rochaná*, Tuttham (Sulphate of copper), *Haritála*, *Manahs'ilá*, scrapings of raw bamboo skin, Prapunnáda (seeds of Chákunde), and Rasánjana and buried a month beneath the roots of an *Arjuna* tree after which it should be taken out and applied to the black cicatrix. The shell of a hen's egg, *Kataka*, *Madhuka*, (Yashti-madhu), sea-oysters and crystals† (pearls according to Jejjata and Brahmadeva) taken in equal parts should be pounded and pasted with

* Rohini, according to some commentators, means a kind of Haritaki ; according to others, it means Katu-tumbi.

† Burnt ashes of sea-oysters and pearls etc., should be used.

the urine of a cow and made into boluses which should be rubbed over the cicatrix.* 84-87.

Roma-sanjanana—hair-producers :— The burnt ashes of ivory and pure *Rasānjana* (black antimony) pounded (and pasted with goat's milk) should be applied to the spot where the appearance of hair (*Lomotpatti*) is desired. An application of this plaster would lead to the appearance of hair even on the palms of the hands. Another alternative is a pulverised compound consisting of the burnt ashes of the bones, nails, hair, skin, hoofs and horns of any quadruped, over a part of the body, previously anointed (rubbed) with oil, which would lead to the appearance of hair in that region. And lastly, a plaster composed of Sulphate of iron, and tender *Karanja* leaves pasted with the expressed juice of *Kapittha*, would be attended with the same result. 88—90.

Hair-depilators :—The hair of an ulcerated part of the body found to interfere with the satisfactory healing up of the ulcer, should be shaved with a razor or clipped with scissors, or rooted out with the help of forceps. As an alternative, an application of a plaster consisting of two parts of pulverised (burnt ashes of) conch-shell and one part of *Haritāla* (yellow orpiment or yellow oxide of arsenic) pasted with *Śukta* (an acid gruel) over the desired spot, would be attended with the same result. A compound made of the oil of **Bhallātaka** mixed with the milky exudation of *Snuhi*, should be used by an intelligent physician as a depilatory measure. As an alternative, the burnt ashes of the stems of plantain leaves and *Dirghavrinta* (*Śyonāka*) mixed with rock-salt, *Haritāla* and the seeds of *Śami*,

* This also is a remedy for giving a natural colour to the skin.



pasted with cold water, should be deemed a good hair-depilatory.* A plaster composed of the ashes of the tail of a domestic lizard, plantain, Haritāla (oxide of arsenic), and the seeds of *Ingudi* burnt together and pasted with oil and water, and baked in the sun may also be used for the eradicating of hair in the affected locality. 94-95.

Vasti-Karma :—A medicated Vasti (enema) should be applied to the rectum in the case of an ulcer marked by an aggravated condition of the deranged Vāyu which is extremely dry and is attended with an excruciating pain occurring specially in the lower region of the body. A measure of **Uttara-vasti**. (Vaginal or Urethral syringe) should be adopted in the cases of strictures and other disorders connected with urine, semen and menstruation, as well as in cases of gravel † in case these are due to an ulcer. An ulcer is purified, softened and healed up by **bandaging** leaving no room for the apprehension of a relapse. Hence bandaging is recommended. 96-98.

Patradāna (application of leaves on an ulcer) :—Leaves possessed of proper medicinal virtues taking into consideration the particular Dosha and season of the year should be tied (over the medicinal plaster applied) over an ulcer of non-shifting or non-changing character and not affecting a large depth of flesh and which refuses to be healed up owing to its extreme dryness. An ulcer of the deranged Vāyu should be tied over with the leaves of the *Eranda*, *Bhurja*, *Putika*, or *Haridra* plants as well as with those of the *Upodika* and *Gāmbhāri*. An ulcer marked by an aggravated condition

* According to some this may be used internally for the purpose.

† D. R. Some read "**Tathānile**" in place of "**Āsmari-vrane**."
"Tathānile" means and in cases of (aggravated) Vāyu.

of the deranged Pitta, or incidental to a vitiated condition of the blood, should be tied in the aforesaid manner with the leaves of the *Kás'mari*, the *Kshira* trees (milk-exuding trees), and aquatic plants. An ulcer due to the deranged and aggravated Kapha, should be tied over with the leaves of the *Páthá*, *Murvá*, *Guduchi*, *Kákamāchi*, *Haridrā* or of the *S'ukanāsdā*. Only those leaves which are not rough, nor putrid, nor old and decomposed, nor worm-eaten and which are soft and tender should be used for purposes of **Patradāna**.* The rationale of such a procedure (*Patra-vandha*) is that the leaves tied by an intelligent physician in the manner above indicated serve to generate heat or cold and retain the liniment or medicated oil in their seat of application. 99-102.

Vermifugal :—The germination of worms due to flies in an ulcer is attended with various kinds of extreme pain, swelling and bleeding in case the worms eat up the flesh. A decoction of the drugs of the *Surasādi* gana proves efficacious as a wash and healing medicine in such a case. The ulcer should be plastered with such drugs as the bark of *Saptaparna*, *Karanja*, *Arka*, *Nimba*, and *Rājádana* pasted with the urine of a cow, or washed with an alkaline wash (for expelling the vermin from it). As an alternative, the worms should be brought out of the ulcer by placing a small piece of raw flesh on the ulcer. These vermin may be divided into twenty groups or classes, which will be fully dealt with later on. (*Uttara-Tantram*—ch. 54). 103.

Vrinhanam (use of restorative and constructive tonics) :—All kinds of tone-giving and constructive measures should be adopted in the case of a patient

* The leaf which does not poison the *Sneha* and the essence of the medicinal drugs placed in a folded piece of linen (and applied over an ulcer is the proper leaf and) should be used for tying over the paste.



weak and emaciated with the troubles of a long-standing sore, taking full precaution not to tax his digestive powers. **Anti-toxic** (Vishaghna) medicines and measures and symptoms of poisonings will be described under their respective heads in the Kalpa-Sthānam. 104-105.

Śiro-virechana and Nasya :—Śiro-virechana measures (errhines) should be resorted to by skilful physicians in respect of ulcers situated in the clavicle regions and marked by itching and swelling. The use of medicated (fatty) **snuff** (Nasya) is recommended in cases where the ulcers would be found to be seated in the regions above the clavicles and marked by an aggravated condition of the deranged Vāyu, pain, and absence of the oily matter. 106-107.

Kavala-dhāraṇa :—Medicated gargles (consisting of decoctions of drugs) of purifying or healing virtues either hot or cold* (according to requirements) should be used in the case of an ulcer in the mouth, for the purpose of alleviating the Doshas therein, for allaying the local pain and burning, and for removing the impurities of the teeth and the tongue. 108.

Dhuma-pāna :—Inhaling of smoke or vapours (of medicated drugs) should be prescribed in cases of ulcers of the deranged Vāyu and Kapha attended with swelling, secretion and pain and situated in the region above the clavicles. Application of **honey** and **clarified butter**, separately or mixed together should be prescribed in cases of extended or elongated ulcers which are traumatic or incidental in their character (Sadyo-Vrana) for allaying the heat of the ulcer and for bringing about its adhesion. **Surgical instruments** should be used in connec-

* Hot gargles are recommended in cases of ulcers of the deranged Vāyu and Kapha while cold ones in cases of ulcers of the aggravated Pitta and blood.

tion with an ulcer which is deep-seated but provided with a narrow orifice and which is due to the penetration of a Śalya (shaft) and which could not be removed with the hand alone. 109-111.

The diet of an ulcer-patient should in all cases be made to consist of food which is light in quantity as well as in quality, demulcent, heat-making (in potency) and possessed of appetising properties.* **Protective rites** should be performed for the safety of an ulcer-patient from the influences of malignant stars and spirits with the major and the minor duties (Yama and Niyama) enjoined to be practised on his behalf. 112-113.

The causes of ulcers are six†; their seats in the body number eight‡ in all; the features which characterise them are five§. The medicinal measures and remedies in respect of ulcers are sixty || in number. And these ulcers are curable with the help or co-operation of the four necessary factors (the physician, the medicines, the nurse and the patient). 114.

The comparatively smaller number of drugs which I have mentioned (under the heads of Ropana, Śodhana, etc., in the present chapter) from fear of prolixity, may be increased in combination with other drugs or substances of similar virtue, (digestionary transformation and potency, etc.) without any apprehension

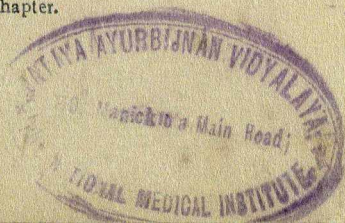
* See Chap. XIX.—Sutra-Sthānam.

† The six causes of an ulcer are Vāyu, Pitta, Kapha, Sannipāta, S'ōnita and Āgantū.

‡ The eight seats of an ulcer are Tvak, Mānsa, S'īrā, Snāyu, Sandhi, Asthi, Koshtha and Marma.

§ The five symptoms of an ulcer are due to Vāta, Pitta, Kapha, Sannipāta and Āgantū. The symptoms due to S'ōnita being identical with those due to Pitta, are not separately counted.

|| The sixty medicinal measures and remedies are those described before in the present chapter.



of doing any mischief thereby. Recipes consisting of rare or a large number of drugs or ingredients, should be made up with as many of them as would be available in the absence of all of them, as mentioned in the present work. A drug belonging to any particular Gana or group if separately described as non-efficacious to any specific disease, should be omitted whereas a drug not belonging to a group may be added to it if it is elsewhere laid down as positively beneficial thereto. 115-117.

Upadrava :—The distressing supervening symptoms which are found to attend a case of **ulcer**, are quite different from those of an **ulcer-patient**. Those which confine themselves solely to the ulcer are five in all—smell, colour, etc., and those which are exclusively manifest in the patient are fever, diarrhoea, hiccup, vomiting, fainting fits, aversion to food, cough, difficult breathing, indigestion and thirst. The medical treatment of ulcers though described in detail in the present chapter, will be further dealt with in the next chapter on **Sadyo-Vrana**. 118-120.

Thus ends the first Chapter of the Chikitsita-Sthānam in the *Suśruta Samhitā* which deals with the treatment of the two kinds of ulcer.



CHAPTER II.

Now we shall discourse on the medical treatment of recent or traumatic wounds or sores (**Sadyovrana-Chikitsā**). 1,

Metrical Texts:—The holy Dhanvantari, the foremost of the pious and the greatest of all discourses, thus discoursed to his disciple Suśruta, the son of Viśvāmitra. 2.

Different shapes of Sores:—I shall describe the shapes of the various kinds of Vrana (sores or wounds) caused by weapons of variously shaped edges in the different parts of the human body. Traumatic ulcers have a variety of shapes. Some of these are elongated, others are rectangular, or triangular, or circular, while some are crescent shaped, or extended, or have a zigzag shape, and some are hollow in the middle like a saucer, and lastly some have the shapes of a barley corn (bulged out at the middle). An abscess or a swelling, due to the several Doshas and which spontaneously bursts out, may assume any of the aforesaid forms, while the one effected by a surgeon's knife should never have a distorted or an improper shape. A surgeon thoroughly familiar with the shapes of ulcers is never puzzled at the sight of one of a terrible and distorted shape. 3—5.

Physicians of yore have grouped these variously shaped traumatic ulcers under six broad sub-heads, such as the Chhinna (cut), Bhinna (punctured or perforated), Viddha (pierced), Kshata (contused), Pichchita (crushed), and the Ghrishta (mangled or lacerated) according to their common features and I shall describe their symptoms. 6.

Their definitions:—A traumatic ulcer which is oblique or straight and elongated is called a **Chhinna** (cut) ulcer, while a complete severance of a part or member of the body is also designated by that name. A perforation of any of the cavities or receptacles of the body by the tip of a Kunta, spear, Rishti, or a sword or by a horn, attended with a little discharge, constitutes what is called a **Bhinna** (punctured) wound or ulcer. The **Ámáśaya** (stomach), the **Pakvāśaya** (intestines), the **Agnyāśaya** (gall-bladder?), the **Mutrāśaya** (urinary bladder), the **Raktāśaya** (receptacle of blood), the heart, the **Unduka** and the lungs constitute what is called the **Koshtha** (viscus). A perforation (of the wall of any) of the **Áśayas** causes it to become filled with blood which is discharged through the urethra, the anus, the mouth or the nostrils and is attended with fever, thirst, fainting fits, dyspnœa, burning sensations, tympanites, suppression of stool, urine and flatus (**Vāta**) with an aversion for food, perspiration, redness of the eyes, a bloody smell in the mouth, and fetid one in the body and an aching pain in the heart and in the sides. 7—10.

Now hear me discourse on (their) detailed symptoms. A perforation of the wall of the **Ámáśaya** (stomach) is marked by constant vomiting of blood, excessive tympanites and an excruciating pain. A perforation of the **Pakvāśaya** fills it with blood and is attended with extreme pain, a heaviness in the limbs, coldness of the sub-umbilical region, and bleeding through the (lower) ducts and orifices of the body. Even in the absence of any perforation, the **Antras** (intestines) are filled with blood through the small pores or apertures in their walls in the same manner as a pitcher with its mouth firmly covered may be filled through the pores (in its sides), and a sense of heaviness is also perceived in their inside. 11-13.

A wound or an ulcer caused by any sharp pointed Śalya (shaft) in any part of the body other than the aforesaid Āśayas with or without that Śalya being extricated is called a **Viddha** (pierced one). An ulcer which is neither a cut nor a perforation or puncture but partakes of the nature of both and is uneven is called a **Kshata** (wound). A part of the body with the local bone crushed between the folds of a door or by a blow becomes extended and covered with blood and marrow and is called a **Pichchita** (thrashed) wound or ulcer. The skin of any part of the body suffering abrasion through friction or from any other such like causes and attended with heat and a secretion is called a **Ghrishta** (mangled or lacerated) wound or ulcer. 14-17.

Their Treatment:—A part or member of the body any wise cut, perforated, pierced or wounded which is attended with excessive bleeding and with the local Vāyu enraged or aggravated by the incidental bleeding, or hæmorrhage will occasion excruciating pain. Potions of Sneha (oily or fatty liquids) and using the same as a washing (in a lukewarm state) should be advised in such cases. Preparation of Veśavāras and other Kriśārās largely mixed with oil or clarified butter should be used as poultices and fomentations with the Māsha pulse, etc., and the use of oily unguents and emulsive Vastis (enematas)* prepared with decoctions of Vāyu-subduing drugs should be applied. A crushed or thrashed wound or abrasion is not attended with any excessive bleeding an absolute absence whereof, (on the contrary) gives rise to an excessive burning sensation and suppuration in the affected part. Cold washes and cooling plasters should be used in these cases for the alleviation of the

* Snehapāna is recommended when the ulcer is in a region above the umbilicus and Vasti-karma when the ulcer is in a subumbilical region.

burning and suppuration as well as for the cooling of the (incarcerated) heat. What has been specifically said of these six forms of ulcers, or wounds should be understood to include the treatment of all kinds of traumatic wounds or ulcers as well. 18—20.

Treatment of cuts or incised wounds

&c :—Now we shall discourse on the medical treatment of **Chhinna** cuts. An open mouthed ulcer on the side of the head* should be duly sutured as described before and firmly bandaged. An ear severed or lopped off should be sutured in the proper way and position and oil should be poured into its cavity. A **Chhinna** cut on the **Krikatiká** (lying on the posterior side of the junction of the neck and the head) and even if it allow the **Váyu** † (air) to escape through its cavity should be brought together and duly sutured and bandaged in a manner (so as not to leave any intervening space between). The part thus adhesioned should be sprinkled with clarified butter prepared from goat's milk. The patient should be made to take his food lying on his back, properly secured or fastened with straps (so that he might not move his head and advised to perform all other physical acts such as, urination, defecation etc, in that position). 21-24

In the case of a lateral and wide-mouthed wound (sword-cut, etc.) on the extremities, the bone-joints should be duly set and joined together as instructed before and the wound should be sutured and speedily bandaged in the manner of a **Vellitaka** bandage, or

* Several commentators explain those that are situated either on the head or on the sides.

† The dictum that a hurt on any of the wind-carrying sounding channels is pronounced to be incurable, should not be supposed to hold good in the present case.

with a piece of skin or hide in the Gophaná or such other form as would seem proper and beneficial and oil should be poured over it. In the case of a wound on the back the patient should be laid on his back, while in the case of its occurring on the chest the patient should be laid on his face.* 25-27.

In the case of a hand or a leg being carried away or completely severed the wound should be cauterised with the application of hot oil and bandaged in the manner of a **Kosha** bandage and proper healing medicines should be applied. An oil cooked with the eight drugs *Chandana, Padmaka, Rodhra, Utpala, Priyangu, Haridrā, Madhuka*, (Yasthimadhu) and milk, forms one of the most efficacious healing (**Ropana**) agents. A Kalka of the thirteen drugs—*Chandana, Karkatākhya*, the two kinds of *Sahá* (Mugáni and Másháni), *Mānsi*, (D.R.—Máshahva, Somáhva), *Amritā, Harenu, Mrindāla, Triphalā, Padmaka* and *Utpala* should be cooked in oil mixed with milk (four times that of oil) and the three other kinds of oily matter (lard, marrow and clarified butter) and this medicated oil should be used for sprinkling over a wound of this type for the purpose of healing (**Ropana**). 28.

Medical Treatment of Bhinna:—

Henceforth we shall deal with the medical treatment of **Bhinna** (excised) wounds. A case of an excised eye (**Bhinna**) should be given up as incurable. But in the case where an eye (ball) instead of being completely separated would be found to be dangling out (of its

* For the complete elimination of the deranged Dosha i.e., pus, etc., of the wound involved in the case—Jejjata.

He who has got a wound on his back should be laid on his face and he who has got an ulcer on his breast should be laid on his back—
 Differeut Reading Gayi.



socket) the affected organ should be re-instated in its natural cavity in a manner so as not to disturb the connected Śirás (nerve arrangements) and gently pressed with the palms of the hand by first putting a lotus leaf on its (eye) surface. After that the eye should be filled (Tarpana) with the following (D.R.—Ājēna in place of "Anēna"—i.e., prepared from goat's milk) medicated clarified butter, which should be as well used in the form of an errhine. The recipe is as follows :—Clarified butter prepared from goat's milk, *Madhuka*, *Utpala*, *Jivaka* and *Rishavaka* taken in equal parts should be pasted together, and cooked with sixteen seers of cow's milk and four seers of clarified butter.* The use of the medicated Ghrita thus prepared should be regarded as commendable in all types of ocular hurt or injury. 29.

In the case of a perforation of the abdomen marked by the discharge of lumps or rope-like Varti (fat) through the wound, the emitted or ejected fat-lump should be dusted with the burnt ashes (D. R.—powders) of astringent woods (such as *Manu*, *Arjuna*, etc.) and black clay (pounded together). A ligature of thread should then be bound round the fat-lump and the fat-lump cut off with a heated instrument. Honey should then be applied and the wound (Vrana) should then be duly bandaged. The patient should be caused to drink clarified butter after the full digestion of his injected food. Instead of this Ghrita, milk prepared

* Several authorities, however, say that equal parts of clarified butter prepared from goat's milk and from cow's milk should be taken and cooked with 16 seers of cow's milk and with the four drugs as a Kalka.

But Gayi recommends only four seers of clarified butter prepared from goat's milk cooked with 16 seers of cow's milk and the four drugs as a Kalka.

medicinally with *Yashti-maddu*, *Lákshá* and *Gokshura*, mixed with (a proper quantity of) sugar and castor oil (as *Prakshepa*)*, is equally commendable for the alleviation of the pain and the burning sensation, (in the wound or ulcer). The fat-lump (pariental fat) afore-said causes a rumbling sound with pain in the abdomen and may prove even fatal in the event of its being left uncut. The medicated oil to be mentioned hereafter in connection with *Medaja-Granthi* should be applied in such cases. 30-32

Foreign bodies (*Sálya*) piercing into any of the *Koshthas* after having run through the (seven layers of) skin, whether passing through the veins, etc., (muscles, nerves, bones or joints, or not, produces the distressing symptoms described before (Ch. III.—*Sutra*). The blood (of the affected chamber or receptacle) in such case lies incarcerated therein in the event of its failing to find an outlet and causes a pallor of the face and a coldness of the extremities and of the face in the patient. Respiration becomes cold, the eyes red-coloured, the bowels constipated and the abdomen distended. The manifestation of these symptoms indicates the incurable character of the disease. 33-34.

* This explanation is given on the authority of old *Vágabhata*. *Dallana*, however, explains the verse in a different way. He explains it to mean two different preparations of milk—one with *Yashti-madhu* and mixed with sugar and castor oil as a *Prakshepa* and the other with *Gokshura* and mixed with *Lákshá* and castor oil as a *Prakshepa*.

A third interpretation would make three preparations of milk prepared separately with *Yashti-madhu*, *Lákshá* and *Gokshura*—sugar and castor oil being mixed in the first (as *Prakshepa*) and castor oil alone in the second and third.

A fourth preparation would be to prepare the milk separately with *Yashti-madhu*, *Lákshá* and *Gokshura* as in the preceding case—without the addition of castor oil (as *Prakshepa*).



Emesis is beneficial in the case where the blood would be found to be confined in the Amásaya (stomach). Purgatives should unhesitatingly be prescribed where the blood would be found to have been lodged in the Pakvásaya (intestines) and Ásthápana measures without oil should be employed with hot, purifying (Śodhana) substances (such as the cow-urine, etc.) The patient should be made to drink a Yavágu (gruel) with Saindhava salt and his diet should consist of boiled rice mixed with the soup of barley, *Kola* and *Kulalttha* pulse divested of oil. 35-36.

In a case of a perforation or piercing of any of the bodily Koshthas attended with excessive hæmorrhage or bleeding, the patient should be caused to drink (a potion of animal) blood and such a case marked by the passage of stool, urine, etc., through their proper channels of outlet and by the absence of fever and tympanites and other dangerous symptoms, (Upadrava), may end in the ultimate recovery of the patient. 37-38.

In a case of a perforation of the Koshtha (abdomen) where the intestines have protruded or bulged out in an untorn condition, they should be gently re-introduced into the cavity and placed in their original position, and not otherwise. According to others, however, large black ants should be applied even to the perforated intestines in such a case and their bodies should be separated from their heads after they had firmly bitten the perforated parts with their claws. After that the intestines with the heads of the ants attached to them should be gently pushed back into the cavity and re-instated in their original situation therein. The bulged out intestines should be rinsed with grass, blood and dust, washed with milk and lubricated with clarified butter and gently re-introduced into the cavity of

the abdomen with the hand with its finger nails cleanly paired. The dried intestines should be washed with milk and lubricated with clarified butter before introducing it into their former and natural place in the abdomen. 39-41.

In a case where the intestines could be but partially introduced, the three following measures should be adopted. The interior of the throat of the patient should be gently rubbed with a finger [and the urging for vomiting thus engendered, would help the full introduction of the intestines into the abdominal cavity]. As an alternative, he should be enlivened with sprays of cold water; or he should be caught hold of by his hands and lifted up into the air with the help of strong attendants and shaken in a manner that would bring about a complete introduction of the intestines into the natural position in the abdominal cavity. They should be so introduced as to press upon their specific (Maladhará) Kalá (facia). 42-43.

In a case where the re-introduction of the intestines into the abdominal cavity would be found to be difficult owing to the narrowness or largeness of the orifice of the wound, it should be extended or widened with a small or slight incision according to requirements, and the intestines re-introduced into their proper place. The orifice or mouth of the wound should be forthwith carefully sutured as soon as the intestines would be found to have been introduced into their right place. Intestines dislodged from their proper seat, or not introduced into their correct position, or coiled up into a lump bring on death. 44-46.

Subsequent Treatment :—[After the full and correct introduction of the intestines] the wound should be bandaged with a piece of silk-cloth saturated



with clarified butter, and the patient should be given a draught of tepid clarified butter (D. R. tepid milk) with castor oil for an easy passage of the stool and downward coursing of the Vāyu (spontaneous emission of the flatus). Then, for its healing up (Ropana), a medicated oil, prepared with the bark of the *Asvakarna*, *Dhava*, *S'ālmali*, *Mesha-s'ringi*, *S'allaki*, *Arjuna*, *Vidāri*, and *Kshiri* trees and *Valā* roots should be applied to the wound. For a year the patient should live a life of strictest continence and forego all kinds of physical exercise. 47—48.

The legs and the eyes of the patient should be washed and sprinkled with water in the event of the **bursting** out of the **testicles** which should be introduced into their proper place within the scrotum, and sewn up in the manner of a Tunna-sevani (raised seam). The scrotum should be bandaged in the shape of a **Gophana-Vandha** and a restraining apparatus (Ghatta-Yantra) placed round the waist of the patient (to guard it against its oscillations or hanging down). The wound should not be lubricated with any kind of oil or Ghrita inasmuch as it would make the wound moist and slimy. The wound should be healed with a medicated oil prepared with *Kāldānusāri*, *Aguru*, *Elā*, *Jāti* flower, *Chandana*, *Padmaka*, *Manah's'ildā*, *Devadāru*, *Amrita* and sulphate of copper (pounded together). 49-50.

A plug of hair should be inserted into a wound on the head, after having extracted the foreign matter therefrom, with a view to arrest the exuding of the brain matter (Mastulunga) which invariably proves fatal to the patient through the aggravation of the deranged Vāyu in consequence thereof. The hairs of the plug should be taken out one by one as the healing process progresses (granulation). An oleaginous medicated plug or lint should be inserted into a wound on any other

part of the body, which should be treated with the measures and remedial agents laid down in connection with a traumatic ulcer after having first allowed the vitiated blood to escape. 51-52.

The medicated oil known as the **Chakra-taila*** should be poured (frequently applied) by means of a slender pipe into an ulcer (wound) which is deep-seated but narrow-mouthed, after first letting out the vitiated blood†. An oil duly prepared and boiled with *Samangā*, *Haridrā*, *Padmā*, *Trivarga*‡ *Tuttha*, *Vidāṅga*, *Katuka*, *Pathyā*, *Guduchi* and *Karanja* acts as a good healing (Ropana) agent (in these cases). The use of an oil prepared with *Tālis'a*, *Padmaka*, *Mānsi*, *Harenu*, *Aguru*, *Chandana*, and the two kinds of *Haridrā*, *Padma-vija*, *Us'ira* and *Yashti-madhu* acts as a good healing remedy in cases of traumatic ulcers. 53-55.

A cut wound (**Kshata**) should be treated with its own specific measures and remedies, while a bruised one (**Pichchita**) should be treated (to all intents and purposes) as a case of *Bhagna* (bone-fracture). The first treatment of a mangled or contused wound (**Ghrishta**) is to extinguish pain, after which it should be dusted with the powder of proper medicinal drugs (such as *S'āla*, *Sarja*, *Arjuna*, etc.). 56-57.

In the case of a dislocation of any part of the body, caused by a fall (from a tree), or in the event of having been run over or trampled down (*Mathita*—by a carriage or by a beast), or of being wounded (by a blow, etc.),

* The oil just pressed out of an old oil-mill or squeezed out of the chips of wood belonging to an old one, in the manner of the **Anu-taila** to be described hereafter, is called the **Chakra-taila**

† The vitiated blood should first be let out for fear of putrefaction of the ulcer.

‡ *Triphalā*, *Trikatu* and *Trimada* are called **Trivarga**.



the patient should be kept immersed in a large tank (Droni) of oil and the diet should consist of the soup or essence (Rasa) of meat. A man fatigued (from the labours of a journey), or hurt at any of the **Marmas**, should be likewise treated with the preceding measures. 58.

Oil or clarified butter should be always administered as drinks, washes or external healing applications for an ulcer-patient with a due regard to his temperament and the nature of the season. Medicated Ghritas, yet to be mentioned in connection with the medical treatment of a Pittaja abscess, should be used as well in the case of a traumatic ulcer (according to its respective indications). A physician should wash a traumatic ulcer attended with an aching pain either with a Valá-oil or tepid clarified butter (according to the nature of the season and the temperament of the patient).* 59—61.

An oil cooked with *Samangá*, *Rajani*, *Padmá* (Bhárgi), *Pathyá*, sulphate of copper, *Suvarchalá*, *Padmaka*, *Lodhra*, *Yashti-madhuka*, *Vidanga*, *Harenuka*, *Tális'apatra*, *Nalada* (*Jatámdnsi*), (red) *Chandana*, *Padma-kes'ara*, *Manjishthá*, *Us'ira*, *Lákshá*, and the tender leaves of *Kshiri* trees, *Piyála* seeds, raw and tender *Tinduka* fruit, or with as many of them as would be available, should be regarded as a good healing remedy in respect of all non-malignant traumatic sores or ulcers. Applications of astringent, sweet, cooling and oily medicines should be used for a week in a case of a traumatic ulcer (*Sadyo-vrana*), after which those mentioned before, in the Chapter of *Divraniya*, should be adopted 62—63.

* With oil in autumn and in the case of a patient of Rakta-pitta temperament, and with Valá-oil in winter and in the case of one of a Váta-kapha temperament.

Treatment of Dushta-Vrana:—In the case of a malignant ulcer (Dushta-Vrana) emetics, errhines, purgatives, Ásthápana, fasting, specific sorts of diet (composed of bitter, pungent and astringent things) and blood-letting, should be prescribed (according to the requirements of each case). The ulcer or sore should be washed with the decoctions of the drugs of both the Áragvadhádi and the Surasádi ganas, and an oil cooked with a decoction of the said drugs should be applied to the wound for the purification (Śodhana) thereof. As an alternative, an oil boiled and prepared in an alkaline water or solution (four times that of oil) with a Kalka of alkaline substances (such as Ghantápáruṇi, Paláśa, etc.) should be used for that end. Oil cooked with *Dravanti* (Śatamuli, according to certain authorities, Mushikáparṇi according to others), *Chiravilva*, *Danti*, *Chitraka*, *Prithviká Nímba-leaves*, *Kásisa*, *Tuttha*, *Trivrit*, *Tejovati*, *Nili* (indigo), the two kinds of *Haridrā*, Saindhava salt, *Tila*, *Bhumi-Kadamba*, *Suvahá*, *Sukákhyá*, *Lāngalāhvá*, *Naipáli*, *Jálini*, *Madayanti*, *Mrigádani*, *Sudhá*, *Murvá*, *Arka*, *Kitári*, *Haritála*, and *Karanja*, or with as many of them as would be available, should be used for the purification (of a malignant sore or ulcer). If found applicable, a medicated Ghrita prepared and cooked with the foregoing drugs and substances as Kalka should be used for the same purpose. In the case of a malignant ulcer, due to the aggravated Váyu, the purifying remedy should consist of a Kalka of Saindhava salt, *Trivrit* and castor leaves. In the case of a (malignant) Pittaja sore, the remedy should consist of a Kalka of *Trivrit*, *Haridrā*, *Yashtimadhu* and *Tila*. In the case of a malignant ulcer, caused by the aggravated **Kapha**, the purifying remedial



SL

agent should consist of *Tila*, *Tejohvā*, *Danti*, *Svarjikā* and *Chitraka* roots. An ulcer brought on owing to the presence of the virus of **Meha** or **Kushtha** in the system, measures and remedies mentioned under the treatment of *Dushta-vrana* should be adopted and used. 64—68.

The recognised school of physicians, which recognises these six types of traumatic sores, does not add to the list, herein mentioned, other types of ulcers, whereas vain pedagogues try to swell it with a larger number of types by adding connotative prefixes and suffixes to the names of the aforesaid six. It is mere vain-gloriousness on their part to say so, since all the other types that they can devise are but single instances and can be made to fall under one of these six general heads. Hence there should be only six kinds (of traumatic sores) and not more. 69.

Thus ends the second Chapter of the *Chikitsita Sthānam* of the *Sus'ruta Samhitā* which deals with the treatment of *Sadyo-vrana* (traumatic sores).



CHAPTER III.

Now we shall discourse on the medical treatments of fractures and dislocations (**Bhagnas**). 1.

Metrical Texts :—A fracture or dislocation (Bhagna) occurring in a person of a Vátika temperament, or of intemperate habits, or in one who is sparing in his diet, or is affected with such supervening disorders (as fever, tympanites, suppression of the stool and urine, &c.) is hard to cure.* A fracture-patient must forego the use of salt, acid, pungent and alkaline substances and must live a life of strictest continence, avoid exposure to the sun and forego physical exercises and parchifying (devoid of oleaginous) articles of food. A diet consisting of boiled rice, meat-soup, milk, † clarified butter, soup of *Satina* pulse and all other nutritive and constructive food and drink, should be discriminately given to a fracture-patient. The barks of *Udumbara*, *Madhuka*, *As'vattha*, *Palás'a*, *Kakubha*, *Bamboo*, *Vata* or *Sála* trees should be used as splints (**Kusa**). *Manjishthá*, *Madhuka*, red sandal wood and *Sáli*-rice mixed with *S'ata-Dhauta* clarified butter (*i.e.*, clarified butter

* Jejjata does not read the first verse, but Gayi does.

† As a general rule, milk should not be prescribed to a patient suffering from an ulcer (*Vrana*) in general ; but a case of fracture forms an exception thereto. Some authorities hold that tepid milk may be given to a fracture-patient, if there be no ulcer (*Vrana*). Others, on the contrary, are of opinion that milk should not, in any case, be given to a fracture-patient for fear of suppuration and the setting in of pus.

Others, however, take "Kshira-sarpih" to be a compound word and explain the term to mean the clarified butter prepared from milk (as distinguished from that prepared from curd).

But experience tells us that in cases of excessive weakness or emaciation, milk may be given without any hesitation—Ed.



washed one hundred times in succession) should be used for **plastering** the fracture. 2-6.

Bandage :—Fractures should be (dressed and) bandaged once a week in cold weather, on every fifth day in temperate weather (*i.e.*, in spring and autumn), and on every fourth day in hot weather (*i.e.*, in summer), or the interval of the period for bandaging should be determined by the intensity of the Doshas involved in each individual case. An extremely loose bandage prevents the firm adhesion of a fractured bone, a light bandage gives rise to pain, swelling and suppuration of the local skin, &c. Hence in cases of fractures, experts prefer a bandage which is neither too tight nor too loose. 7-8.

Washings :—A cold decoction of the drugs of the *Nyagrodhádi* group should be used in washing (the affected part), whereas in the presence of (excessive) pain, (the part) should be washed with milk boiled with the drugs of the (minor) *Pancha-mula*, or simply with the oil known as the *Chakra-taila* made lukewarm*. Cold (or warm) lotions and medicinal plasters (*Pradehas*) of Dosha-subduing drugs should be prescribed with due regard to the nature of the season and the Doshas involved in each case. 9-10.

A preparation of milk † from a cow, delivered for the first time, boiled with the drugs of the *Madhurádi* group and mixed with powdered shellac and clarified butter (as an afterthrow) should be given (when cold) to a fracture-patient as a beverage every morning. In a case of

* In winter and where the aching pain is present due to Váyu and Kapha.

† Consisting of the drugs of the *Kákolyádi* group weighing two Tolás, milk sixteen Tolás, water sixty-four Tolás, boiled together with the water entirely evaporated.



fracture attended with ulcer on the part, an astringent plaster plentifully mixed with honey and clarified butter should be applied ; and the rest (diet and regimen of conduct) should be as laid down in the case of a (simple) fracture. 11-12.

Prognosis :—A case of fracture occurring in a youth or a person with slightly deranged Doshas or in winter, is held to be easily curable (with the help of the aforesaid medicines and diet). A fractured bone in a youth is joined by the aforesaid treatment in the course of a month, in two months in the case of a middle-aged man and in three months in one of old age. 13-14.

An elevated and fractured joint should be reduced by pressing it down, while one hanging down should be set by raising it up, by pulling it in the case of its being pushed aside, and by reinstating it in its upward (proper) position in the event of its being lowered down. An intelligent physician should set all dislocated (Bhagna) joints, whether fixed or movable, by the mode of reduction, known as Anchhana, Pidana, (pressure), Sankshepa and Vandhana (bandaging). 15-16.

Treatment :—A crushed or dislocated joint should not be shaken (*i.e.*, should be kept at rest) and cold lotions or washes and medicated plasters (Pradeha) should be applied to the part. A joint is spontaneously reset to its natural or normal state or position after the correction of its deformity incidental to a blow or hurt having been effected. The fractured or dislocated part should be first covered with a piece of linen soaked in clarified butter. Splint should then be placed over it and the part properly bandaged. 17-19.

Treatment of fractures in particular limbs:—Now we shall discourse on the measures to be adopted in fractures occurring in each particular



limb. In the case of a **nail-joint**, being in any way crushed or swollen by the accumulation of the deranged blood (in the locality), the incarcerated blood should be first let out with the help of an awl (Árá) and the part should be plastered with a paste of Sáli-rice. A finger or **phalanx** bone put out of joint or fractured should be first set in its natural position and bandaged with a piece of thin linen and should be then sprinkled over with clarified butter. In the case of a fracture in the **foot** the fractured part should be first lubricated with clarified butter, then duly splinted up, and bandaged with linen. Such a patient should forego all kinds of locomotion. In the case of a fracture of the **knee-joint** or **thigh-bone** the affected part should be lubricated with clarified butter and carefully pulled straight, after which it should be splinted with barks (of Nyagrodha, etc.) and bandaged with clean linen. In case of the fracture projecting out a **thigh-bone** should be reset with the help of a circular splint and bandaged. In the case of Sphutita (cracked) or Pichchita (bruised) thigh-bone, the part should be also bandaged in the aforesaid manner. 20-24.

In a case of a fracture in the **Kati** (Ilium-bone), it should be reduced by the fractured bone being raised up or pressed down (as the case may be) and the patient should then be treated with Vasti (enemas of medicated oils or Ghritas*). In the case of a fracture of one of the **rib-bones** (Pársaka), the patient should be lubricated with clarified butter. He should then be lifted up (in a standing posture) and the fractured rib (bone), whether left or right, should be relaxed by being rubbed with clarified butter. Strips of bamboo or pad

* In the Nidána-Sthána—Chap. XV., 9—it is stated that a case of fracture in the Kati should be given up (Varjjayet). Jejjata, however, explains "Varjjayet" as "hard to cure."

(Kavaliká) should be placed over it and the patient should be carefully laid in a tank or cauldron full of oil with the bamboo splint duly tied up with straps of hide. In the case of a dislocation of the **Amsa-Sandhi** (shoulder-joint), the region of the **Kaksha** (arm-pit) should be raised up with an iron-rod (**Mushala**) and the wise physician should bandage the part, thus reduced, in the shape of a **Svastika** (8-shaped) bandage. A dislocated **elbow-joint** should be first rubbed with the thumb, after which it should be pressed with a view to set it in its right place by fixing and expanding the same. After that the affected part should be sprinkled over with any oleaginous substance. The same measures should be adopted in the case of a dislocation of the **knee-joint** (**Jánu-sandhi**), the **wrist-joint** (**Gulpha-sandhi**) and the **ankle-joint** (**Mani-vandha**). 25-29.

In the case of fractured bones in the palms of the hands, the two palms* should be made even and opposed, and then bandaged together and the affected parts should be sprinkled with raw and unmedicated oil (**Áma-taila**). The patient should be made later first to hold a ball of cow-dung, then a ball of clay and then a piece of stone in his palms and so on, with the progressive return of strength (to the affected parts). In a case of a fracture of the **Akshaka**, the affected part should be first fomented and then reduced by raising it up with a **Mushala** (iron-rod) in the arm-pit or by pressing it down (as the case may be) and should be firmly bandaged. A case of fractured **arm-bone** should be treated according to the directions given in the case of a fractured thigh-bone. 30-32.

* The text has "*Ubhe tale same kritvá*." Jejjata explains "*Ubhe tale*" to mean "palms of the hands and soles of the feet;" Gayá Dása explains it to mean "the palms of both the hands."



In the case of a bending (twisting) or intussusception of the **neck** downward, the head should be lifted up by putting the fingers into the hollow (*Avatu*) above the nape of the neck and at the roots of the jaw-bones (*Hanu*)*. Then the part should be bandaged with a piece of linen after having evenly put the splint (*Kuśa* round the neck). The patient should be caused to lie constantly on his back for a week. In a case of a dislocation of the joints of the **jaw-bones** (*Hanu*), the jaw-bones should be fomented and duly set in their right position, bandaged in the manner of a *Panchāngi-vandha*, and a *Ghrita* boiled and prepared with (the *Kalka* and a decoction of) the *Madhura* (*Kákolyádi*) and *Váyu*-subduing (*Chavyádi*) groups should be used as errhines by the patient. 33-34.

A tooth of a young person, not broken but loose, should be plastered with a cooling paste on its outside after having pressed out the accumulated blood at the root. The tooth should be sprinkled or washed with cold water and treated with drugs having *Sandhāniya* (adhesive) properties†. The patient should be caused to drink milk with the help of a lotus stem. The loose tooth of an old man should be drawn. A nose sunk down or depressed (by a blow) should be raised up with the help of a rod or director, while it should be straightened in a case of simple bending. Then two tubes, open at both ends, should be inserted into the nostrils (to facilitate the process of breathing) and the organ should be bandaged and sprinkled with clarified butter. In the case of (the cartilage of) the ear being broken, the organ should be rubbed with

* According to *Gayi*, the lifting up of the head by putting fingers in the *Avatu* and in the *Hanu*s should be made in cases of bending and intussusception of the neck respectively.

† Honey, clarified butter, and drugs of the *Nyagrodhádi* group.

clarified butter straightened, and evenly set in its right position and bandaged. Measures and remedial agents mentioned in connection with Sadyo-vrana, should be likewise adopted and employed in the present instance. 37.

In a case of a fracture of the bone of the forehead unattended by any oozing out of brain matter, the affected part should be simply rubbed with honey and clarified butter and then duly bandaged. The patient should take clarified butter for a week* 38.

Cooling plasters and washes should be applied to a part of the body, swollen but not in any way ulcerated on account of a fall or a blow. In the case of a fracture of the bone in the leg and in the thigh, the patient should be laid down on a plank or board and bound to five stakes or pegs in five different places for the purpose of preventing any movements of his limbs. The distribution of the (bindings) pegs in each case should be as follows. In the first case (fractured leg-bone), two on each side of the two thighs making four and one on the exterior side of the inguinal region of the affected side. In the second case (fracture of knee-joint) two on each side of the ankle-joints making four and one on the side of the sole of the affected leg. The same sort of bed and fastenings should be used in cases of fractures and dislocations of the pelvic-joint, the spinal column, the chest and the shoulders†. In cases of long-standing dislocations, the joint should be lubricated with oily or lardaceous applications, fomented and softened (with

* In the case of such an emission or oozing out a plug of bristles or hair as described in the preceding chapter and remedial agents laid down in connection therewith, should be used.

† The principle of splintering and bandaging may be profitably compared with those followed in Agnur's splint,

proper medicinal drugs) in the manner mentioned above in order to reduce it to its natural state. 39-40.

In the case of a faulty union of a (fractured) bone lying between two joints (**Kāṇḍa-bhagna**), the union should be again disjoined, and the fractured bone should again be set right and treated as a case of ordinary fracture. In the case where a fractured bone would be found to have protruded out of the ulcerated part and dried, it should be carefully cut off near the margin of the (incidental) ulcer, (so as not to create a fresh ulcer on any other spot of the affected part) and subsequently treated as a case of fractural ulcer. A fracture occurring in the upper part of the body should be treated with applications of **Mastikya-Sirovasti** [oil-soaked pads on the head] and pourings of oil into the cavity of the ears. Potions of clarified butter,* **errhines** and **Anuvāsana** (enematas) should be prescribed in cases of fractures in the extremities. 41-43.

Gandha-Taila :—Now we shall discourse on the recipe of a medicated oil, capable of bringing about the union of fractured bones. A quantity of black sesamum-seeds (tied up into a knot with a piece of linen) should be kept immersed at night in a stream of running water and taken out and dried in the sun (for seven consecutive days). It should then be saturated with cow's milk (at night and dried in the sun, during the second week). During the third week the sesamum-seeds should be saturated with a decoction of **Yashti-madhu** (at night) and dried in the sun the next day. Then (during the fourth week) it should be again saturated with cow's milk and dried and powdered. The said sesamum-

* According to **Jejjata**, not only **Anuvāsana-enematas** but potions of clarified butter and **errhines** also should be prescribed in cases of fractures in the extremities.

powder and powder of the drugs, constituting the *Kákolyádi Gana* as well as *Yasthi-madhu*, *Manjishthá*, *Sárivá*, *Kushtha*, *Sarja-rasa*, *Mánsi*, *Deva-dáru*, (red) *Chandana*, and *S'atapushpá* should be mixed together. Then a quantity of cow's milk boiled with the aromatic drugs (of the *Eládi* group) should be used with the preceding pulverised compound for the purpose of pressing out the oil therefrom. The oil thus pressed out should be boiled in four times the quantity of cow's milk with the drugs such as *Elá*, *S'álparni*, *Tejapatra*, *Jivaka*, *Tagara*, *Rodhra*, *Prapaundarika*, *Kálánusári*, (*Tagara*), *Saireyaka*, *Kshira-Vidári*, *Anantá*, *Madhuliká*, *S'ringá-taka*, and those of the aforesaid list (*Kákolyádi* group and *Yasthi-madhu*, etc., up to *S'atapushpá*) pasted together. The oil should be duly cooked over a gentle fire and is called the **Gandha-Taila**. This oil should be administered with good results in possible ways (e.g., as potions, liniments, unguents and errhines) to a fracture-patient. Its efficacy is witnessed in cases of convulsions, hemiplegia, parchedness or atrophy of the palate, in *Ardita* (facial paralysis) as well as in *Manyá-stambha* (Paralysis or stiffness of the neck), in diseases of the head (cephalgia), in ear-ache in *Hanu-graha*, in deafness and in blindness and in emaciation due to sexual excesses. Administered in food or drink, or employed as a liniment, in *Vasti-karma* (enemata measures) or as an errhine, it acts as a sovereign restorative. Rubbed over the neck, chest and shoulders, it adds to the strength and expansion of those parts of the body, makes the face fair and lovely like a full-blown lotus and imparts a sweet

* There should be three parts of sesamum powder and one part of the powders of *Kákolyádi*, *Yashti-madhu*, *Manjishthá*, etc. (combined). But *giva Dasa* says that four parts of sesamum-powders should be taken.



fragrance to the breath. It is one of the most powerful remedial agents in disorders of the aggravated Váyu (diseases of the nervous system). It may be used even by kings and for them it should be specially prepared. 44-45.

The expressed oil of the seeds of the Trapusha, Aksha and Piyála should be cooked with a decoction of drugs of the Madhura group (Kákolyádi gana) and with ten times the quantity of milk. A quantity of lard if available, should be poured into it (during the process of cooking). It is an excellent medicated oil and used as a potion for anointing, and as an errhine, Vasti-karma and washes, it speedily brings about the union of fractured bones. 46.

A physician should exert his utmost to guard against the advent of any suppurative setting in in a fractured bone, since a suppuration of the local veins, nerves and muscles is difficult to cure. A complete union of a fractured joint should be inferred from its painless or unhurt character, from its full and perfect development (leaving no detectable signs of its once fractured condition), from the absence of all elevation (unevenness) and from its perfect freedom in flexion and expansion, etc. 47-48.

Thus ends the third Chapter of the Chikitsita Sthánam in the Sus'ruta Samhitá which deals with the medical treatment of fractures and dislocations.



CHAPTER IV.

Now we shall discourse on the medical treatment of nervous disorders (**Vāta-vyādhi**). 1.

Metrical Texts :—The patient having been made to vomit in the event of the deranged Vāyu being incarcerated (lodged) in the **Āmāsaya** (stomach), a pulverised compound known as the **Shad-Dharana-yoga** (a compound of six Dharanas or twenty-four Māshā weight) with tepid water should be administered to him for seven days. A compound made up of *Chitraka*, *Indra-yava*, *Pāthā*, *Katuka*, *Ativishā*, *Abhayā* (taken in equal parts) together is known as the **Shad-Dharana-yoga*** and contains the properties of subduing an attack of Vāta-vyādhi. 2-3.

In the event of the aggravated Vāyu being incarcerated in the **Pakvāsaya** (intestines), purgatives of fatty matters (*Sneha-Virechana*, i.e., *Tilvaka-Sarpih*, etc.), and *Sodhana-Vasti* of purifying drugs (with decoctions and *Kalka* of fatty matters) and diet (*Prāśa*) abounding in salt† or saline articles should be prescribed. In the case of the aggravated Vāyu being incarcerated in the **Vasti** (urinary bladder), diuretic (lit. bladder-cleansing) measures and remedial agents should be resorted to. Anointing with medicated oils, *Ghritas*, etc., application of poultices (*Upanāha*) compounded of Vāyu-subduing drugs, massage, and plasters (*Ālepa*) of similar properties are the remedies in cases where the aggravated Vāyu is lodged in the **internal ducts** or channels such

* One Dharana is equal to four Māshās.

† *Sneha-Lavana* and *Kānda-Lavana*, etc.



as the ears, etc., of the body. Blood-letting (venesection) is the remedy where the aggravated Váyu would be found to be confined in the **skin, flesh, blood or veins** (Śirás). Similarly, application of fatty matters (Sneha), actual cauterization, massage, application of poultices and binding of ligatures should be the remedies where the aggravated Váyu would be found to have become involved in the **Suáyu** (ligaments), **joints and bones**. Where the aggravated Váyu would be found to have become situated in the bone, the skin and flesh of that part of the body should be perforated with a proper surgical instrument (Ārá-Śastra) and the underlying bone should be similarly treated with an awl. A tube open at both ends should be inserted into the aperture, thus made, and a strong physician should suck the aggravated Váyu from out of the affected bone by applying his mouth to the exterior open end of the tube. 4-9.

In the case of the aggravated Váyu having contaminated the **semen**, measures and remedies for seminal disorders (Śukra-dosha)* should be employed. The intelligent (physician) would take recourse to measures, such as blood-letting, immersion or bath in a vessel (full of Váyu-subduing decoctions), fomentation with heated stones, as well as in the manner of Karshu-Sveda, vapour-bath in a closed chamber (Kutisveda), anointment, Vasti-Karmas, etc., in the event of the aggravated Váyu having extended throughout the whole organism; whereas bleeding by means of a horn (cuffing) should be regarded as the remedy when the aggravated Dosha

* Treatments, such as, the purification of the semen, etc., and the use of medicines for making Aphrodisia (Váji-karana) and for the remedy of the disordered urinary organ (Mutra-dosha) should be adopted and employed.

would be found to have been confined in any particular part of the body.* 10-12.

In the event of the aggravated Vāyu being connected either with the **Pitta** or the **Kapha**, such a course of treatment should be adopted as would not be hostile to the two other Doshas. Blood-letting (in small quantities) should be resorted to several times in a case of complete æsthesia (Supta-Vāta) and the body should be anointed with oil mixed with salt and chamber-dust (Agāra-dhūma) Milk boiled with a decoction of the drugs of the Pancha-mula group, acid-fruits (Phalāmī), meat-soup or soup of (well-cooked) corn (Dhānya) with clarified butter are beneficial in cases of Vāta-roga. 13-15.

Śālvana-Upanāha :—A poultice composed of the drugs of the Kákolyādi group, the Vāyu-subduing drugs (those of Bhadra-dārvādi and Vidāri-gandhādi groups), and all kinds of acid articles† (such as, Kānjika, Sauvira, fermented rice-gruel, etc.), the flesh of animals which live in swamps (Ānupa) or in water (Audaka)‡, oil, clarified butter and all kinds of lardaceous substances, mixed together and saturated with a profuse quantity of salt and then slightly heated is known by the name of **Śālvana**. A person suffering from any form of Vāta roga should be always treated with such Śālvana poultices (Upanāha). The poultice should be applied to such part of the body as is

* It is to be understood that measures and remedies laid down under the head of Sarvānga-gata should be used when the Vāyu would be found to be diffused throughout the whole organism instead of being confined to any specific part.

† According to others it means all kinds of acid-fruits, etc.

‡ Chakradatta reads “वानुमंसः सुस्निग्धः” (well-cooked with the flesh of “Ānupa” animals) in place of वानुपौदकमंससु ।



numbed, painful or contracted and the affected part should be firmly bandaged thereafter with a piece of Kshauma* linen or woollen cloth. As an alternative, the affected part should be plastered (and well rubbed) with the ingredients of the Śálvana-Upanáha and inserted into a bag made of cat or mongoose skin or that of a camel or deer hide. 16.

The aggravated Váyu, if located in the shoulders, the chest, the sacrum (Trika) or the Manyá, should be subdued by emetics and errhines judiciously employed. Siro-Vasti should be applied to the head of the patient as long as it would take one to utter a thousand Mátrás (a short vowel sound), more or less, as the case may require, where the aggravated Váyu would be found to have located itself in the head, (if necessary) blood-letting should be resorted to. As a mountain is capable of obstructing the passage of the wind, so the Sneha-Vasti (oily enema) is alone capable of resisting the action of the aggravated Váyu whether it extends throughout the whole system or is confined to a single part. 17-19

Measures beneficial to Vata-Vyádhi:

—An application of Sneha, fomentations, anointment of the body, Vasti, oily purgatives, Siro-vasti, the rubbing of oils on the head, oily fumigation, gargling with tepid oil, oily errhines, the use of meat-soup, milk, meat, clarified butter, oil and other lardaceous articles (of food), all kinds of acid fruits, salt, lukewarm washes, gentle massage, the use of saffron, *Agura*, *Patra*, *Kushiká*, *Elá*, *Tagara*, the wearing of woollen, silken, cotton or any other thick kind of garments, living in a warm room or in one not exposed to the wind or in an inner chamber, the use of a soft bed, basking in the glare of fire, entire sexual abstinence, these and such like other things

* Some read it as Válka, i.e., made up bark.

should be generally adopted by a patient suffering from Váta-roga 20.

The Tilvaka-Ghrita :—A paste (Kalka) of the following drugs, viz, *Trivrit*, *Danti*, *Suvarna-kshiri*, *Saptalá*, *S amkhini*, *Triphalá* and *Vidanga*, each weighing an Aksha (two tolás), and **Tilvaka**-roots and *Kampillaka*, each weighing a Vilva (eight tolás), a decoction of *Triphalá* and curd, each weighing two Pátras * (thirty-two seers) and clarified butter, weighing sixteen seers, should be duly cooked together. Medical authorities recommend this **Tilvaka-Ghrita** as an oily purgative in cases of Váta-roga. *Asóka-Ghrita* and *Ramyaka-Ghrita* are prepared in the same manner, (viz., by substituting *Asóka* and *Ramyaka* respectively for *Tilvaka*). 21.

The Anu-Taila :—The log of a long-standing wooden oil-mill should be cut into small chips and then thrashed and boiled in water in a large cauldron. The globules of oil that will be found floating on the surface of the boiling water should be skimmed off either with the hand or with a saucer. The oil thus collected should then be cooked with the Kalka of Váyu-subduing drugs as in the preparation of a medicated oil. This oil is known as the **Anu-Taila**. The use of this oil has been advised by medical authorities in cases of Váta-roga. This oil is so named from the fact of its being pressed out of small chips of oily wood (as described above). 22.

The Sahasra-páka-Taila :—The wood of drugs belonging to the group of *Mahá-pancha-mula* should be collected in large quantities and burnt on a

* Pátra means 64 Palas, i.e., 8 seers, but in cases of liquids the weight should be doubled.



plot of land, so as to make the soil black. The fire should be kept burning one whole night ; on the following morning on the extinction of the fire the ashes should be removed and the ground, when cool, should be soaked with one hundred Ghatas (six thousand and four hundred seers) of oil cooked with the drugs of the *Viddāri-gandhādi group* and with the same quantity of milk and kept in that condition for one night more. On the next morning the earth should be dug up, down to the stratum found to have been soaked with the oil and the soil should then be dissolved in warm water in large cauldrons for the purpose. The oil that will be found floating on the surface of the water should be skimmed off with both hands and kept in a safe basin. Then the decoction of the *Vāyu-subduing drugs* (the *Bhadra-dārvādi group*), meat-juice, milk, fermented rice-gruel (each taken in a quantity measuring a quarter part of that oil) should be taken one thousand times and each time should be boiled with the oil. *Vāyu-subduing* and aromatic drugs and spices, in the northern (trans-Himālaya) and southern (Deccan) countries, should be thrown into it and boiled with the oil. The boiling should be completed within the period during which it could be properly done. Then after the completion of the cooking, conch-shells should be blown, Dundubhis should be sounded, umbrellas should be held open, chowries should be blown into it and a thousand Brāhmins should be treated with repasts. The oil so sacredly prepared should be stored carefully in golden, silver or earthen pitchers. This oil is called the **Sahasrapāka-Taila** and is of irresistible potency and fit even for the use of kings. **Satapāka-Taila** is also prepared in the above manner (with the aforesaid ingredients) by cooking it one hundred times only. 23.



The Patra-Lavana :—The green leaves of the *Eranda* plants and those of the trees known as *Mushkaka*, *Naktamāla*, *Atarushaka*, *Putika*, *Āragvadha* and *Chitraka* should be thrashed with (salt of equal quantity) in an Udukhala (a hand thrashing mill) and placed in an earthen pitcher, saturated with oil or clarified butter. Having covered the mouth of the pitcher with a lid, it should be plastered and burnt in fire of cow-dung. The medicine thus prepared (with the help of internal heat) is called the **Patra-Lavana**. Medical experts advise the application of this medicine in cases of *Vāta-roga*. 24.

The Kānda-Lavana :—Similarly, *Snuhi*-twigs, *Brinjal* (*Vártaku*), and *S'igru*-bark (taken in equal parts) and rock-salt (of equal weight as the entire drugs) should be thrashed and kept in a pitcher. Oil, clarified butter, lard and marrow should be added to it equal in weight with salt and then having covered the mouth of the pitcher with a lid, it should be plastered and burnt in a fire of cow-dung (as before). The use of this medicated salt which is called the **Kānda-Lavana** or **Sneha-Lavana** is recommended by experts in *Vāta-roga*. 25.

The Kalyānaka-Lavana :—The following drugs with their roots, leaves and twigs, *viz.*, *Gandira*, *Palāsa*, *Kutaja*, *Vilva*, *Arka*, *Snuhi*, *Apāmārga*, *Pātalā*, *Pāribhadra*, *Nādeyi*, *Krishnagandhā*, *Nipa*, *Nimba*, *Nirdahani*, *Atarushaka*, *Nakta-mālaka*, *Putika*, *Vrihati*, *Kantikari*, *Bhallātaka*, *Ingudi*, *Baijayanti*, *Kadali*, *Varshābhu*, *Hrivera*, *Kshuraka*, *Indravārūni*, *Svetamokshaka* and *Asoka* should be gathered in a green condition and mixed with (as large a quantity of) rock-salt and having thrashed them in an Udukhala should be burnt in a hermetically sealed pitcher as



above, after which it should be filtered (twenty times) and boiled in the manner of alkaline preparations. At the close of the boiling, powders* of the drugs of the *Hingvadi* or *Pippalyadi* group should be mixed with it. This medicine is called the **Ka'āynaka-Lavana** and is specially efficacious in all cases of *Vāta-roga* and is applicable both in food and drink in cases of *Gulma*, enlarged spleen, impaired digestion, indigestion, hæ-morrhoids, intestinal worms, aversion to food and cough. 26.

Memorable Verse :—The remedy proves efficacious in *Vāta-roga* through its heat-making potency, power of liquifying and secreting the deranged *Doshas* and of restoring and correcting them as well. 27.

Thus ends the fourth Chapter of the *Chikitsita Sthānam* in the *Sus'ruta Samhitā* which deals with the treatment of *Vāta-Vyādhi*.

* The total weight of these powders should be one-fourth of the weight of the rock-salt taken in the course of the preparation.—*Dallana*.



CHAPTER V.

Now we shall discourse on the chapter which deals with the medical treatment of **Mahá-Váta-Vyádhi**. 1.

Several authorities group the disease Váta-Rakta under two different sub-heads, such as superficial and deep-seated. But such a classification is arbitrary and unscientific, inasmuch as this disease first manifests itself on the surface (layer of the skin) like Kushtha and gradually invades the deeper tissues of the body. Hence there are no (two) forms of this disease. 1-2.

Causes of Váta-Rakta :—The Váyu of the body is enraged or agitated by such causes as wrestling with a man of superior and uncommon physical strength, etc., while the blood is vitiated by such causes as constant over-eating of edibles which are of difficult digestion and heat-making in their potency or ingestion of food before the digestion of the previous meal. The Váyu thus enraged and agitated enters into the blood-carrying channels of the body and being obstructed in its passage, becomes mixed with the vitiated blood. The deranged Váyu and the blood thus combine to give rise to a disease characterised by the specific symptoms of each, which is known as **Váta-Rakta**. The characteristic pain, which at first confines itself to the extremities, gradually extends over the whole body.

Premonitory symptoms of Váta-Rakta :—The disease is ushered in with a pricking pain, a burning and an itching sensation (in the affected part), a swelling, roughness and numbness (anæsthesia) of the diseased locality, throbbing of the veins, ligaments,



nerves and arteries, a weakness in the thighs and sudden appearance of red or brownish circular patches on the palms of the hands and soles of the feet, fingers and heels, etc., (A. R.—wrists). If neglected and immoderately treated in its premonitory stages, the disease soon develops its characteristic symptoms in succession, which have been described before; whereas (a lifelong) deformity (of the affected part) is the penalty for neglecting it (in its fully patent or developed stage). 3.

Memorable Verse :—Men of a mild and delicate constitution, as well as those who are (inordinately) stout or sedentary in their habits or are addicted to unwholesome and incompatible food, etc., are generally found to be susceptible to an attack of **Vāta-Rakta**. 4.

Prognosis :—A physician is advised to take in hand the medical treatment of a **Vāta-Rakta**-patient who has as yet not lost much strength and muscle, nor is afflicted with thirst, fever, epileptic fits, dyspnœa, cough, numbness (of the affected part), aversion to food, indigestion, extension and contraction of the limb, as well as of a person who is strong and temperate in his living and can afford to pay for the diet and other necessary accessories of the treatment. 5.

Preliminary remedial measures :—In the first stage of the disease the blood, having become vitiated owing to its being obstructed in its course (by the unusually agitated **Vāyu** in the system), should be gradually and not profusely bled, except when the body would be found to have become extremely dry or to have lost its natural healthful glow or complexion through the action of the aggravated morbid principle (**Vāyu**), for fear of further aggravating the **Vāyu**. Emetics, purgatives, and **Vasti** (enemas), etc., should be administered and the patient should be made to take a diet consisting

of old and matured clarified butter (and boiled rice), in the case where the aggravated condition of the deranged Váyu would be found to predominate. As an alternative, he should be made to drink a potion consisting of goat's milk mixed with half its quantity of oil, with two Tolá weight of *Yashti-madhu* or goat's milk cooked with *Pris'niparni* (two Tolá weight) with honey and sugar (added after cooking), or cooked with *S'unthi*, *S'ringá-taka*, and *Kas'eruka*, or cooked with *S'yámá*, *Rásná*, *Sushavi*, *Pris'niparni*, *Pilu*, *S'atávári*, *S'vadamshtá* and *Das'a-mula*. 6.

Oil, cooked with the addition of milk previously boiled with the decoction of *Das'a-mula* of eight times its own weight and a Kalka of *Madhuka*, *Mesha-s'ringi* (A. R. Sárngashtá), *S'vadamshtá*, *Sarala*, *Bhadra-dáru*, *Vachá* and *Surabhi* pasted together, should be administered in drinks, etc., (viz., anointment, sprinkling, etc.). As an alternative, the oil cooked with the decoction of *S'atávári*, *Mayuraka*, *Madhuka*, *Kshira-Vidári*, *Valá*, *Ati-valá* and *Trina-pancha-mula*, with the paste of the drugs belonging to the *Kákolyádi* group, or the oil* cooked with the decoction and a Kalka of *Valá* for a hundred times should be prescribed for the patient. The affected part should be washed with the milk, boiled with the roots of the *Váta-hará* (Váyu-subduing) drugs (i.e., *Das'a-mula*), or simply with *Amla* (gruel, etc.), or a plaster composed of barley, *Madhuka*, *Eranda* (castor) and *Varshábhū* (pasted together and heated), should be applied to the part. 7.

Plasters, etc. :—Barley, wheat, sesamum, *Mudga* pulse and *Másha* pulse should be taken in equal

* According to *Jejjáta Áchāryya*, the "*Valá-Taila*", which is administered in the medical treatment of *Mudha-garbha*, should be prescribed in this case.



parts and pounded separately ; and the paste of the following drugs, viz., *Kákoli*, *Kshira-kákoli*, *Jivaka*, *Rishabhaka*, *Valá*, *Ati-valá*, *Visa-mrindá* (lotus stem), *Pris'niparni*, *Mesha-s'ringi*, *Piyála*, *S'arkará* (sugar), *Kas'eruka*, *Surabhi*, and *Vachá* should be mixed with each of the preceding powders and each of these compounds (so formed) should be boiled with milk, oil, lard, marrow and clarified butter. The five compounds, thus prepared, are called **Páyasas**, which should be applied as a hot poultice (**Upanáha**) to the affected part ; or an **Utkáriká**, made of the pulp of oily fruit (seeds)* (prepared by cooking them with milk) should be applied ; or powders of wheat, barley, sesamum, Mudga pulse, or Másha pulse, and *Veśávára*, made of various kinds of fish and flesh, should be used as a plaster. *Vilvapes'iká*, *Tagara*, *Deva-dáru*, *Saralá*, *Rásná*, *Haremu*, *Kushtha*, *S'ata-pushpá*, *Elá*, *Surá* and cream of milk-curd pasted together, should be applied to the affected part as a plaster (**Upanáha**). As an alternative, the expressed juice of *Mátulunga*, mixed with *Kánjika*, *Saindhava* salt and clarified butter, pasted together with the root of the *Madhu-s'igru* and with sesamum,† should be used in a similar way. The preceding remedies should be administered in a case of **Váta-Rakta** marked by a preponderance of the aggravated *Váyu*. 8.

Váta-Rakta with a preponderance of Pitta :—In cases of *Váta-Rakta* where the *Pitta* preponderates, the patient should be made to drink a potion consisting of a decoction of *Drákshá*, *Áragvadha*, *Katphala*, *Kshira-vidári*, *Yashti-madhu*, *Chandana* and *Kás marya* sweetened with a quantity of sugar and honey.

* Such as sesamum, castor-seed, linseed, *Vibhitaka*-seeds, etc.

† Some say that a paste of sesamum only should be used as a separate plaster.



As an alternative, a decoction of *S'atdvāri*, *Yashti-madhu*, *Patola*, *Triphalā*, and *Katu-rohini*, or a decoction of *Guduchi*, or a decoction of the drugs belonging to the Chandanādi group, which are possessed of virtues for allaying pitta fever, should be administered to the patient, sweetened with sugar and honey. Clarified butter, cooked and prepared with a decoction of bitter and astringent drugs* also proves beneficial in such cases. 9.

The affected part should be washed (Parisheka) with a decoction of *Visa-mrindā*, *Chandana* and *Padmaka* (taken in equal parts and) mixed with half its quantity of milk. As an alternative, the affected part should be sprinkled with a compound composed of milk, the expressed juice of *Ikshu* (sugar-cane), honey, sugar, and washings of rice (taken in equal parts); or with curd-cream, honey, and *Dhānyāmla* (fermented paddy-gruel), mixed with a decoction of grapes and *Ikshu*; or the affected part should be anointed with clarified butter cooked with the drugs of the Jivaniya group, or with the clarified butter washed a hundred times in water, or with clarified butter cooked with the *Kalka* of the *Kākolyādi* group. 10.

Pradeha (plaster) composed of *S'ālī*, *Shashtika*, *Nala*, *Vanjula*, *Tālis'a*, *S'rigātaka*, *Galodya*, *Haridrā*, *Gairika*, *S'aivala*, *Padma-kāshtha*, leaves of *padma* (lotus), pasted with *Dhānyāmla* and mixed with clarified butter, should be applied to the affected part. This plaster (*Pradeha*) may be applied lukewarm even in cases of *Vāta-Rakta*, marked by a preponderance of the aggravated *Vāyu*. All the remedial measures (laid down above) may also

* D. R.—Sweet, bitter, and astringent drugs.

Bitter drugs—*Patolādi* group; *Kashāya* drugs—*Triphalādi* group; sweet drugs—*Kākolyādi* group.

be advantageously applied in cases marked by a preponderance of the vitiated blood, with this exception that cold plasters and repeated blood-lettings should be resorted to in the latter (Raktaja-Vāta-Rakta). 11.

Vāta-Rakta with a preponderance of Kapha:—In cases where the Kapha preponderates, the patient should be made to drink a potion consisting of a decoction of *Haridrā* and *Āmalaka*, sweetened with honey; or a decoction of *Triphalā*, or a Kalka of *Madhuka*, *S'ringavera*, *Haritaki* and *Tikta-rohini* mixed with honey. As an alternative, *Haritaki* and treacle with either cow's urine or water, should be given to him.

The affected part or limb should be sprinkled or washed with cow's urine, oil, alkaline water, *Surā*, *Śukta*, or with a decoction of Kapha-destroying drugs. A hot decoction of the drugs constituting the *Āragvadhādi* group may be used with benefit in sprinkling the affected part. The body of the patient should be lubricated or anointed with clarified butter, boiled with the cream of milk-curd, cow's urine, wine, *S'ukta* and with the Kalka of *Yashti-madhu*, *Sārivā* and *Padma-kāshtha*. A plaster (Pradeha), composed of pounded sesamum, mustard seed, linseed and barley (taken in equal parts) and mixed and pasted with *S'leshmātaka*, *Kapittha*, *Madhu-s'igru* and cow's urine, and *Yava-kshāra* should be applied (hot to the seat of the disease). 12-13.

The Five Pradehas:—(1) A paste of white mustard seed, (2) that of sesamum and *Āsvagandhā*, (3) a similar paste of *Piyāla*, *S'elu* and *Kapittha* bark, (4) that of *Madhu-s'igru*, *Punarnavā* and (5) a paste of *Vyosha*, *Tiktā*, *Prithakparṇi* and *Vrihati*, these five kinds of Pradehas should be separately pasted with alkaline water and (any of them) applied lukewarm to the affected locality. 14.

As an alternative, a plaster composed *S'ālaparni*, *Pris'niparni*, *Vrihati* and *Kantakāri*, pasted together with milk and mixed with *Tarpana*,* should be applied (to the seat of the disease). In cases of *Vāta-Rakta* involving the concerted action of two or three of the *Doshas*, the remedy consists in applying such drugs in combination as are possessed of the efficacy of subduing the action of each of them. 15.

Guda-Haritaki and Pippali-Vardhamāna Yogas :—*Haritaki* with treacle may be used in all types of *Vāta-Rakta*. As an alternative, the patient should be enjoined to use *Pippali*, pasted with milk or water, every day (in the following way).† The number of *Pippali* should be increased by five or ten respectively on each successive day till the tenth day of its use ; after which period the number of *Pippali* should be decreased (by a similar number) on each successive day till it is reduced to the original five or ten. The patient should live on a diet of milk and rice only (during the entire course of this treatement). This medicine which is known as the *Pippali-Vardhamāna*,‡ proves efficacious in cases of *Vāta-Rakta*, chronic fever (*Vishama-Jvara*), aversion to food, jaundice, enlarged spleen, piles, cough, asthma, œdema, phthisis, loss of appetite, heart-disease and ascitis. 16.

Clarified butter, cooked in milk with the paste of the drugs of the *Jivaniya* group, should be used in

* Flour of barley or fried grain, dissolved in water, is known as **Tarpana**.

† The dosage should begin originally with five or ten *Pippalis* according to the strength of the patient.

‡ Maharshi Charaka mentions this **Yoga** in the chapter on *Rasāyana* and prescribes it also in the treatement of *Udara*. Chakradatta mentions the use of this medicine in the treatment of liver and spleen and of fever.



anointing (the body of the patient). A plaster, composed of *Sahá*, *Sahadevā*, *Chandana*, *Murvā*, *Mustā*, *Piyāla*, *S'atāvāri*, *Kas'eru*, *Padma-kāsthā* *Yashti-madhu*, *S'atapushpā* (A. D. *Vidāri*) and *Kushtha*, pasted together with milk and mixed with the cream of clarified butter, should be applied (hot) to the affected locality. A plaster composed of *Saireyaka*, *Atarushaka*, *Valā*, *Ati-valā* *Jivanti* and *Sushavi*, pasted together with the milk of a she-goat, should be likewise applied (to the seat of the disease). As an alternative, the diseased locality should be plastered with the pastes of *Kās'marya*, *Yashti-madhu* and *Tarpana* mixed together; or it should be treated with *Pinda-Taila*, prepared by cooking *Madhu-chchhishta* (bee's wax), *Manjishthā*, resin, and *Ananta-mula* in milk* (and oil taken together). 17-20.

In all cases of *Vāta-Rakta*, old and matured clarified butter boiled with the expressed juice of *Āmalaka* should be prescribed as drinks. The affected part should be washed or sprinkled with old and matured clarified butter, boiled with a decoction and paste (*Kalka*) of the drugs belonging to the *Kākolyādi* group, or with those of the *Jivaniya* group, or with the decoction of *Sushavi*, or of *Kāravellaka*. The *Valā-Taila*† should be used for sprinkling and immersing purposes, and as drink and *Vasti-karma* (enemas).

Diet :—The diet should consist of articles made of old and matured *S'āli* or *Shashtika* rice, wheat or barley, taken with milk‡ or with the soup of *Mudga*

* Milk four times of oil should be taken.

† The "*Valā-Taila*" described in the medical treatment of *Mudha-garbha*, ch. XV.

‡ In the case of *Vāta-roga* with preponderant *Pitta*, the patient should take the food with milk; in the preponderance of *Vāyu*, with the soup of *Jāngala* meat; and in the preponderance of *Kapha*, with *Mudga-soup*, devoid of any acid combination.

pulse or flesh of Jāngala animals and devoid of any acid combination.* 21.

Frequent blood-letting should be resorted to and measures, such as, emetics, purgatives, Āsthāpana and Anuvāsana should be adopted in cases of the aggravated Doshas† (involved in the case). 22.

Memorable Verses :—A case of Vāta-Rakta of recent growth, proves readily amenable to the remedial measures described before. Long-standing, *i.e.*, chronic cases (of Vāta-Rakta) are never perfectly cured, but can only be palliated. The application of poultices (Upanāha), of medicinal washes or sprinkles (Parisheka), hot-plasters, anointings (Abhyanga), spacious and comfortable bed-chambers which do not admit of too large an influx of air, shampooing, and the use of soft and pleasant beds and soft pillows, are chiefly recommended in a case of Vāta-Rakta ; whereas physical exercise, sexual intercourse, display of anger, the use of heat-making, saline, acid and difficultly digestible food and eatables producing effuse serus or slimy matter in the bodily channels, and sleep in the day-time (should be deemed extremely injurious and hence) should be studiously refrained from. 23.

The Medical Treatment of Apatānaka :—The medical treatment of a patient suffering from **Apatānaka** (hysterical convulsions), not exhibiting fixedness of gaze and arched eye-brows, with an absence

* In the case of Vāta-roga, with a preponderance of Pitta, the patient should take his food with milk ; in the preponderance of Vāyu, with the soup of Jāngala meat ; and in the preponderance of Kapha, with Mudga-soup, devoid of any acid combination.

† In the preponderance of Kapha, emetics should be employed ; in the preponderance of Pitta, purgatives should be given ; and in the preponderance of Vāyu, Anuvāsana and Āsthāpana measures should be resorted to.



of perspiration, quivering, delirium and the numbness of genitals, found not to fall on the ground but capable of being supported on his arms (Akhattá-páti) and whose trunk is not bent or arched on its posterior (dorsal) side (Vahiráyáma), may be attempted (with success). The body of the patient should be first anointed with emulsions (Sneha) and then fomented; strong medicated snuff should then be administered for purifying (the accumulated mucus in) the head. After that the patient should be made to drink a clear potion prepared of clarified butter, cooked in combination with a decoction of the drugs constituting the Vidári-gandhádi group, extract of meat, milk and milk-curd, so as to arrest the further expansion of the deranged Váyu into the system.

Traivrita Ghrita :—A decoction of the Váyu-subduing drugs, such as, *Bhadra-dárvádi*, etc., barley, *Kulattha* pulse, *Kola*, and the flesh of the *Ānupa* and *Audaka* animals with the *Pancha-Vargas** should be

* According to Jejjata, "Pancha-Vargam" means the flesh of the five kinds of *Ānupa* animals, viz., *Kulachara*, *Plava*, *Kos'astha*, *Pádin* and *Matsya* (fishes).

The reading here is doubtful. The term "Audaka" in the compound word "Sānupaudaka-māmsam" seems to be redundant, inasmuch as "Audaka" animals are included in the "Ānupa" class. (Sutra, chap. XLVI. Page 487, Vol I). In this case the word "Pancha-vargam" also seems to be only an explanation of the term "Ānupa" meaning the five kinds of *Ānupa* flesh, and it seems to have surreptitiously crept into the body of the text from the marginal notes of some authoritative manuscript copy of the book. If, however, we are to abide by the current reading of the book, "Pancha-varga" cannot mean the five kinds of flesh in the presence of the word "Audaka" mentioned separately, as Jejjata would have it. In that case it can only mean either the five groups of *Pancha-mulas*, viz., the major *Pancha-mulas*, the minor *Pancha-mulas*, the *Valli-Pancha-mulas*, the *Kantaka-Pancha-mulas* and the *Trina-Pancha-mulas*. (Sutra, chap. XXXVIII, Pages 355-6, Vol. I), as some would explain it to mean. Others, however, prefer the reading as it is and explain the term "Pancha-varga" to be the five kinds of medicinal drugs mentioned before in the sentence,



made. The decoction, thus prepared, should be mixed with milk and fermented rice-gruel, etc., and then cooked with an adequate quantity of clarified butter, oil, lard and marrow by casting Kalka (paste) of the Madhura (Kákolyádi group) into it. This Traivrita-Ghrita* (lit. consisting of clarified butter with three other lardaceous articles), thus prepared, should be administered to Apatánaka-patients in potions and diet, in effusions and immersions, in anointings and errhines, as well as in Anuvásana measures. Diaphoretic measures should be applied according to the prescribed rules. In a case marked by an unusually aggravated condition of the Váyu, the patient should be made to stand neck-deep in a pit tolerably warmed or heated with burning husks, and cow-dung. As an alternative, Palása leaves should be strewn over a hot stone-slab or over a hot oven, after having sprinkled wine over them, and the patient should be laid full length upon these leaves, or fomentations should be made with *Ves'avára*, *Kris'ara* and *Páyasa*. 24—25.

An oil, cooked in combination with the expressed viz., the Vátaghna drugs, Yava, Kola, Kulattha and flesh. Others, again, mean by the term "Pancha-varga" the five parts, viz., leaf, fruit, flower, bark and root, of the Vátaghna drugs mentioned in the sentence.

We have, however, the authority of Vágbhata and Chakradatta in our side to accept the first view that the term "Audaka" is redundant, inasmuch as they have not read the word "Audaka" in their compilations.—Ed.

* According to Dallana, four seers of clarified butter, oil, lard and marrow (each weighing one seer), sixteen seers of Kánji, etc., sixteen seers of milk, sixteen seers of the decoction and one seer of the Kalka (paste) should be taken in its preparation. But Gayádása is of opinion that four seers of milk should be taken instead of sixteen seers.

Four seers of Ghrita, etc., four seers of milk, six seers of Kánji, six seers of the decoction and one seer of the Kalka (paste) are generally taken by experienced physicians in its preparation.—Ed.



juice of *Mulaka*, *Eranda*, *Sphurja*, *Arjaka*, *Arka*, *Saptalá* and *S'amkhini* should be used in washing (*Parisheka*), etc., the body of an *Apatánaka*-patient. Potions consisting of sour **Dadhi** (milk-curd) mixed with powdered pepper and *Vachá*, or of oil, clarified butter, lard, or honey, mixed with the same things and taken in an empty stomach, prove curative in cases of *Apatánaka*. 26.

These remedial measures are applicable in cases of *Apatánaka* when the action of the aggravated *Váyu* alone preponderates. In a case involving the concerted action of two or more of the *Doshas*, drugs, remedial to each of them, should be combinedly employed. Medicinal liquid errhines (*Avapida*) should be employed after the subsidence of a severe attack. The fat or lard of a cock, crab, *Krishna*-fish, porpoise or of a boar should be taken* by the patient. As an alternative, he should be made to drink (a potion consisting of) milk boiled with *Váyu*-subduing drugs (*Daśa-mula*, etc.), or a gruel (*Yavágu*) composed of barley, *Kola*, *Kulattha*-pulse and *Mulaka*, cooked with curd, oil and clarified butter. Oily purgatives, *Ásthápana* and *Anuvásana* measures, should be employed if the paroxysm does not subside even in ten days. Medicines and remedial measures laid down under the head of *Váta-vyádhi* and the process of *Rakshá-karma*, should be likewise adopted (in cases of *Apatánaka*). 27.

Treatment of Pakshágháta :—A physician is enjoined to take in hand the medical treatment of a patient laid up with *Pakshágháta*, unattended by a discolouring of the skin, but having pain in the affected part, and who habitually observes the rules of

* *Vridha Vágbhata* recommends external application with these lards,

diet and regimen and who can afford to pay for the necessary accessories. The affected part should be first anointed and then fomented. Mild emetics and purgatives should be subsequently employed for the purpose of cleansing the system. Medicated Anuvásana and Ásthápana measures should then be employed, after which the general directions and remedial measures, laid down under the treatment of Ákshepaka, should be followed and employed at the proper time. Applications of the Mastikya-Siro-vasti with the Anu-taila for anointing the body, of the articles of Sálvana-Sveda for the purpose of poulticing, and of the Valá-taila as an Anuvásana measure, are the marked features of the medical treatment of this disease, and should be followed carefully for a continuous period of three or four months. 28.

These preceding remedies as well as dry fomentations (Ruksha-sveda) and errhines, which possess the virtue of subduing the deranged Váyú and Kapha should be likewise employed in cases of **Manya-stambha**. 29

Treatment of Apatantraka :—Fasting is prohibited in cases of patients suffering from Apatantraka (Apoplectic convulsions). Emetic, Ásthápana and Anuvásana measures are likewise forbidden. The passage of respiration should be blown open by violent breathings in the event of its being choked up with an accumulation of the deranged Váyú and Kapha. The patient should be made to drink a potion consisting of *Tumburu*, *Pushkara*, *Hingu*, *Amla-vetasa*, *Haritaki* and the three (officinal) kinds of salts, with a decoction of barley.* As an alternative, four seers of clarified

* **Chakradatta** quotes this in the chapter on the treatment of colic (s'ula), but does not read 'Amla-vetasa' there.



butter, cooked in combination with sixteen seers of milk; two Pala weight of Sauvarchala salt and fifty of Haritakis should be prescribed for the use of the patient. All other remedial agents, possessing the virtue of subduing the deranged Vāyu and Kapha should be likewise employed. 30.

Treatment of Ardita :—A patient suffering from Ardita (facial Paralysis) should be treated with the measures and remedies laid down under the head of Vāta-vyādhi in the event of his being found to be sufficiently strong and capable of affording the necessary expenses for his treatment. Errhines, Mastikya-Śiro-vasti, inhalation of the smoke (Dhuma-pāna) from medicated drugs, poulticing (Upanāha), unguents and Nādi-sveda, etc., are the special features of the medical treatment of this disease. After that, a decoction should be made of the drugs constituting the groups of *Trina-Pancha-mula*, *Mahā-Pancha-mula*, *Kākolyādi* and *Vidāri-gandhādi* groups, aquatic bulbs, and the flesh of animals which are aquatic in their habits (Audaka) and those which frequent swampy places (Ānupā), by boiling them together with a Drona measure of milk and double the quantity of water. The decoction should be considered boiled when three quarter parts of its original weight of the liquid has been evaporated and should then be strained. The decoction thus prepared should be boiled with a Prastha measure of oil (four seers) and be removed from the fire when the oil is well mixed with the milk. The compound (oil and milk) thus prepared should be allowed to cool down and then churned. The churned off cream (Sneha) should be again boiled with the drugs of the Madhura (Kākolyādi) group, Māsha-parni and milk (four times that of the original oil). This medicated oil is known as the **Kshira-Taila** and should



be administered as potions and unguents, etc., to an Ardita-patient. The above preparation with clarified butter in the place of oil is known as the **Kshira-sarpih** and it should be used as an Akshi-tarpana (eye-lotion). 31—32.

Venesection should be duly resorted to in the affected parts, according to the directions given before, in cases of Sciatica, Gridhrasi, Viśvachi (Synovitis of the knee-joints), Kroshtuka-śirah, Khanja (lameness), Pangula, Vāta-kantaka, Pāda-dāha, Pāda-harsha, Ava-vāhuka and Vādhiryya and in cases where the deranged Vāyu would be found to be seated in a Dhamani. Measures and remedies laid down under the head of Vāta-vyādhi should be adopted, except in a case of Ava-vāhuka. 33.

The expressed juice of green ginger, made lukewarm after mixing it with (equal quantities of) oil, honey and Saindhava salt, should be poured into the cavity of the ear in a case of (acute) ear-ache. As an alternative, the urine of a she-goat, or oil and honey, or oil with the urine (of a cow) mixed with the expressed juice of *Mātulunga*, pomegranate and tamarind, or the oil boiled and prepared with Surá, Takra, Śukta, salt and the urine (of a cow), should be poured into the cavity of the ear; fomentation should be given (to the interior of the affected organ) after the manner of Nádi-sveda. The remedial measures for Vāta-vyādhi should be resorted to. We shall, however, revert to the subject in the Uttara-Tantra. 34.

The patient should be made to drink a potion of Sneha-Lavana* dissolved in an adequate quantity of water, or the powders of the Pippalyádi group (with an

* Sneha-Lavana has been described in Chap. 4. (treatment of Vāta-vyādhi) para. 24.



adequate quantity of water), or clarified butter, thickened or saturated with pulverised asafœtida and Yava-kshāra (Carbonate of Potass), in cases of **Tuni** and **Prati-tuni**. Applications of **Vastis** should also be resorted to. 35.

In a case of **Ādhmāna** (Tympanites), the remedy should consist in the applications of powders of the **Dipaniya** (appetising) group, of suppositories (**Phala-varti**), **Vastis** and digestive drugs (**Pāchaniya** group). The patient should also be advised to observe a rigid fast and his abdomen should be fomented with hot palms. After that he should break his fast with boiled rice prepared with appetising (**Dipana**) drugs such as, **Dhānyaka**, **Jiraka**, etc. Similarly, a case of **Pratyādhmāna** should be treated with fasting, emetics and appetising drugs. Cases of **Ashthilā** or **Pratyashthilā** should be treated as a case of **Gulma** and internal abscess, to all intents and purposes. 36-38.

Hingvādi-Vati:—A compound consisting of asafœtida, *Trikatu*, *Vachā*, *Ajamodā*, *Dhanyā*, *Ajagandhā*, *Dādimba*, *Tintidi*, *Pāthā*, *Chitraka*, *Yava-kshāra*, *Saindhava* salt, *Vid* salt, *Sauvarchala* salt, *Svarjikā-kshāra*, *Pippali-mula*, *Amla-vetasa*, *S'athi*, *Pushkara-mula*, *Hapushā*, *Chavyā*, *Ajāji* and *Pathyā*, powdered together and treated many times with the expressed juice of *Mātu-lunga* in the manner of *Bhāvanā** saturation, should be made into boluses, each weighing an *Aksha* (two *Tolās*) in weight. One (such) pill should be taken (in an empty stomach) every morning in all diseases of the deranged *Vāyu*. This compound proves curative in cough, asthma, internal tumour (*Gulma*), ascites, heart-disease,

* “*Bhāvanā*” consists in soaking a powder or a pulverised compound with the expressed juice or decoction of any drugs or with any liquid and in getting it dry (generally). This process should be continued many times (generally seven times) in succession.



tympanites, aching pain at the sides, in the abdomen and in the bladder, in cases of an aversion to food, retention of stool, strangury, enlarged spleen, piles, Tuni and Prati-tuni. 39.

Memorable Verses :—From the symptoms or leading indications, exhibited in each case and from a close examination thereof, it should be inferred whether the Váyu alone has been deranged or whether it has combined with any other Dosha, or has affected any other fundamental principle (Dhátu) of the organism as well; and the medical treatment should follow a course, so as not to prove hostile to the **Doshas** or the **Dhátus** (organic principles) implicated in the case, in its attempt to subdue the aggravated Váyu. In a case of cold, compact and painful swelling (appearing in any part of the body) owing to the combination of the deranged Váyu with fat, the treatment should be identical with that of a swelling in general. 40-41.

Uru-stambha :—The deranged Váyu, surcharged with the local fat and Kapha gives rise to a swelling in the region of the thigh which is known as **Uru-stambha**; others designate it as **Ádhya-Váta**. This disease is marked by lassitude and an aching pain in the limbs, by the presence of fever, horripilation and somnolence and by a sensation of coldness, numbness, heaviness, and unsteadiness in the thighs, which seem foreign to the body. 42.

Its Treatment :—The patient should be made to drink a potion consisting of the pulverised compound known as the Shad-dharana-yoga; or of the drugs constituting the Pippallyádi group, dissolved in (an adequate quantity of) hot water without using any oleaginous substance; or a lambative, composed of pulverised *Triphalá* and *Katuka* mixed with honey, should be



used; or a potion, consisting of Guggulu or S'ilājatu dissolved in cow's urine, should be administered. These compounds subdue the aggravated Vāyu surcharged with deranged fat and Kapha and prove curative in heart-disease, an aversion to food, Gulma and internal abscesses. A medicinal plaster composed of *Karanja* fruits and mustard seeds, pasted with a copious quantity of cow's urine should be applied hot to the affected part, which may be as well fomented with cow's urine mixed with alkali (Kshāra); or the locality should be shampooed with articles devoid of any oily substance. The diet of the patient should consist of old and matured Syāmāka, Kodrava, Uddāla and Sāli rice with the soup of dry Mulaka or Patola, or of the flesh of animals of the Jāngala group cooked without clarified butter or vegetables (*S'āka*) cooked without salt. The use of oil and of lardaceous substances in general (*Sneha-karma*) should, however, be prescribed after the deranged fat and Kapha have (totally) subsided. 43.

Therapeutic properties of Guggulu:

—Guggulu is aromatic, light, penetrating into the minutest parts of the body, sharp, heat-making in potency, pungent in taste and digestion, laxative, emulsive, slimy, and wholesome to the heart (*Hridya*). **New Guggulu** is an aphrodisiac and a constructive tonic. **Old Guggulu** is anti-fat and hence reduces corpulency. It is owing to its sharpness and heat-making potency that Guggulu tends to reduce the Vāyu and the Kapha; it is its laxativeness that destroys the Malas (refuge deposits in the Srotas) and the deranged Pitta; its aroma removes the bad odours of the **Koshtha**; and it is its subtle essence that improves the appetising faculty. Guggulu should be taken every morning with a decoction of *Triphalā*, *Dārvi* and

Patola or with that of *Kus'a* roots*; it may also be taken with an adequate quantity of cow's urine, or with alkaline† or tepid water. The patient should take boiled rice with soup, milk, or extract of meat after the Guggulu has been digested. Diseases such as internal tumour (Gulma), urinary complaints (Meha), Udāvarta, ascites, fistula-in-ano, worms in the intestines, itches, an aversion to food, leucoderma (Śvitra), tumour and glands (Arvuda), sinus, Ādhya-Vāta, swelling (œdema), cutaneous affections (Kushtha) and malignant sores and ulcers readily yield to it, if used for a month (with the observance of the regimen of diet and conduct laid down previously). It also destroys the deranged Vāyu incarcerated in the Koshtha, bones and joints, just as a thunderbolt will destroy trees. 44.

Thus ends the fifth Chapter of the Chikitsā Sthānam in the Suśruta-Samhitā which deals with the medical treatment of Mahā-Vāta-Vyādhi.

* Some explain that a third decoction should be that of Triphalā, Dārvi, Patola and Kus'a grass taken together.—Dallana.

The decoctions may be prepared separately with Triphalā, Dārvi, Patola and Kus'a.—*Ed.*

† Some read "Kshira" (milk) in the place of "Kshāra" (alkali).



CHAPTER VI.

Now we shall discourse on the medical treatment of Hæmorrhoids (**Arśas**). 1.

The remedial measures in hæmorrhoids may be grouped under four subheads ; namely, the employment of (active) medicinal remedies, the application of an alkali (into the seat of the disease), actual cauterization (of the polypii) and surgical operation. A case of recent origin involving the action of the Doshas to a slight degree and uncomplicated with any grave or dangerous symptom and complication may prove amenable to medicine alone. Deep-seated polypii, which are soft to the touch and markedly elevated and extended (external—D R.), should be treated with alkaline applications, while those which are rough, firm, thick and hard should be cauterized with fire. Polypii which are raised, exuding and slender at the roots should be surgically treated. Hæmorrhoids which are held amenable to medicine and are not visible (to the naked eye) should be treated with the help of medicines alone. Now, listen to the procedure to be adopted in the treatment of Arśas which would require alkaline applications, a cauterization, or a surgical operation. 2.

Application of Kshára:—The body of the patient suffering from hæmorrhoids, in the event of possessing sufficient strength, should be anointed and duly fomented. He should be made to eat warm but demulcent food (Anna) in a fluid state (of a gruel-like consistency) to alleviate the excessive pain incidental to the action of the deranged Vāyu. In a season neither too hot nor too cold, and when the

sky is cloudless, he should be placed in a raised up position in a clean and well-equipped place on a plain slab or on a clean bed with his head resting on the lap of an attendant and the anal region exposed to the sun. In this position the waist should be made to elevate a little and to rest on a cushion of cloths or blankets. The neck and the thighs of the patient should be drawn out, and then secured with trappings and held fast by the attendants so as not to allow him to move. Then a straight and slender-mouthed instrument (somewhat like the modern rectal speculum), lubricated with clarified butter, should be gently inserted into the rectum and the patient should be asked to strain down gently at the time. After seeing the polypus (through the speculum), it should be scraped with an indicator and cleansed with a piece of cotton or linen after which an alkali should be applied to it. The exterior orifice of the instrument should be closed with the palm of the hand after this application and kept in that manner for a period that would be required to utter a hundred words.

Then after having cleansed the polypus, a fresh application should be made according to the strength of the alkali and the intensity of the aggravated Doshas involved in the case. Further application of the alkali should be stopped and the polypus washed with fermented rice-gruel (*Dhanyāmla*), curd-cream, *Sukta*, or the juice of acid fruits, in the event of its having been found to have become a little flabby, bent down, and to have assumed the colour of a ripe Jambu fruit. After that it should be cooled with clarified butter mixed with *Yashti-Madhu*, the trappings should be removed and the patient should be raised up and placed in a sitting posture in warm water and refreshed with

sprays of cold water, or, according to some authorities, with warm water. Then the patient should be made to lie in a spacious chamber, not exposed to the blasts of cold winds (specially), and advised as regards his diet and regimen. Each of the remaining polypii, if any, should be cauterized with the alkaline application at an interval of seven days. In case of a number of polypii, those on the right side should be first cauterized and then those on the left, and after that those on the posterior side ; and lastly those that would be found to be in front. 3.

Polypii, having their origin in the deranged **Váyu** and **Kapha**, should be cauterized with fire or alkali ; while those, which are the outcome of the deranged **Pitta** and vitiated **blood** should be treated with a mild alkali alone. A perfect and satisfactory cauterization (**Samyag-dagdha**) of a polypus should be understood from such symptoms as, restoration of the bodily **Váyu** to its normal condition, relish for food, keenness of the appetite, lightness of the body and improvement in strength, complexion and pleasure. An over-cauterized (**Ati-dagdha**) polypus gives rise to such symptoms as, cracking of the region of the anus, a burning sensation (in the affected locality), fainting, fever, thirst, and profuse hæmorrhage (from the rectum), and consequent complications ; while an insufficiently cauterized (**Hina-dagdha**) polypus is known by its tawny brown colour, smallness of the incidental ulcer, itching, derangement of the bodily **Váyu**, discomforts of the cognitive organs and a non-cure of the disease. 4.

A large polypus, appearing in a strong person, should be clipped off (with a knife) and cauterized with fire. As regards an external polypus full of extremely aggravated Doshas (**Váyu**, **Pitta**, **Kapha** and **blood**) no

Yantra should be used, but the treatment should consist of fomentation, anointing, poulticing, immersion, plastering, evacuating measures (*Visráva*), cauterization with fire and alkali and a surgical operation. Measures laid down under the head of Rakta-pitta should be resorted to in cases of hæmorrhage (from the seat of affection). Remedies mentioned in connection with dysentery (*Atisára*) should be employed in cases of a looseness of the bowels; whereas in cases of constipation of the bowels oily purgatives should be administered, or the remedies for *Udávartta* should be adopted. These rules shall hold good in the cases of treating (cauterization, etc.) a polypus occurring in any part of the body whatsoever. 5.

A polypus should be caught hold of and an alkali should be applied thereto with a *Darvi*, or a brush (*Kurcha*), or an indicator (*Śaláká*). In a case of a prolapsus of the anus, cauterization should be made without the help of any Yantra (*speculum*).

Diet :—In all types of hæmorrhoids, the diet should consist of wheat barley, *Shashtika* rice or *Śáli* rice, (boiled) and mixed with clarified butter, to be taken with milk, *Nimba-soup*, or *Patola-soup*. The patient should be advised to take (his meal) with *Vástuka*, *Tanduliyaka*, *Jivanti*, *Upodiká*, *As'va-valá*, tender *Mulaka*, *Pálanka*, *Asana*, *Chilli*, *Chuchchu*, *Kaldya*, *Valli*, or any other *S'ákas* (pot-herbs), according to the nature of the Doshas involved in the case. Any other oleaginous, diuretic, laxative and appetising (*Dipana*) diet possessing the virtue of curing piles should also be prescribed. 6.

After the cauterization of the polypus, as well as in a case where no cauterization would be necessary, the body of the patient should be anointed with clarified



butter and oil, etc., and measures both **general** and **specific** (mentioned below and in accordance with the Dosha or Doshas involved) should be employed for the purpose of improving the digestive-powers and to alleviate any aggravation of the **Váyu**. He should be made to drink a potion consisting of clarified butter cooked with the **Váyu**-subduing and appetising (*Dipana*) drugs* (*Kalka* and *Kváttha*) mixed with the powders of *Hingu*, etc., (described in the treatment of *Mahá-Vátavyádhi*, chapter. V). In a case of **Pittaja-Arsás**, clarified butter prepared by cooking it with the drugs of the *Pippallyádi* and *Bhadra-dárvádi*† groups, should again be cooked with the decoction of *Prithakparnyádi* group and the *Kalka* of the *Dipaniya* (*Pippallyádi*) group, and given as a potion to the patient. In a case of hæmorrhoid due to the action of the deranged blood‡ (**Raktársás**), the clarified butter should be cooked with a decoction of *Manjishthá*, *Murungi*, (*D. R. Surangi*), &c., while in a case of one due to the action of the deranged **Kapha**, the clarified butter should be cooked with a decoction of the drugs constituting the *Surasádi* group. The supervening distresses should be alleviated by the remedial measures peculiar to each of them 7.

Cauterization with fire or with an alkali or any surgical

* Such as the decoction of the drugs of the *Bhadra-dárvádi* (*Váyu*-subduing) and *Pippalyádi* (*Dipaniya*) groups. This *Ghríta* should be prescribed in a **Vátaja Arsás**.

† The epithet "*Bhadra-dárvádi-pippallyádi*" in the phrase "*Bhadra-dárvádi-pippallyádi-sarpih*" seems to be included into the body of the text through an accident. In our opinion, it is only an annotation of the phrase "*Dipaniya-Váta-hara-siddha*" occurring in the last sentence.—*H. I.*

‡ The *Kalkas* of the *Pippallyádi* group should also be taken in the preparation of the two kinds of medicated clarified butter to be used in *Raktársás*, and *Pittársás*.—*Dallana*.

operation in the present disease should be effected by introducing the Yantra (speculum) into the rectum (with the utmost care, inasmuch as an error happening in any of these cases may bring on impotency, swelling (Śopha), a burning sensation, epilepsy, rumbling in the intestines, retention of stool and urine, dysentery, diarrhoea, or may ultimately end in death. 8.

Rectal Speculum :—Now we shall describe the dimensions of the Yantras (and the materials of which they are made of). The instrument may be made of iron, ivory, horn or wood. It should be made to resemble the teat of a cow. In the case of a male patient, it should be four fingers in length and five fingers in circumference ; whereas in the case of a female patient, the length should be commensurate with that of the palm of the hand (of the same length as before—D. R.) and six fingers in circumference. The instrument should be provided with two separate apertures in its inside, one for seeing the interior of the rectum and the other for applying an alkali, or actual cautery (Agni) to the polypus, since it is impossible to apply fire and alkali through the same aperture. The circumference of the aperture in the upper three fingers of the instrument should be like that of a thumb. There should be a bulb-like protrusion of the same width, at the bottom, and above it a space of half a finger's width. Thus we have briefly described the shape of the instrument. 9-10.

Ālepa (plasters) :—Now we shall describe the plasters to be applied to the hæmorrhoids (to cause their spontaneous dropping off). The first consists of pulverised turmeric mixed with the milky exudation of the *Snuhi tree*. The second contains of the cock-evacuations and pulverised *Gunja*, turmeric and *Pippali*

pasted with the urine and bile of a cow. The third is compounded of *Danti*, *Chitraka*, *Suvarchikā* and *Lāngali* pounded together and made into a paste with cow's bile. The fourth consists of *Pippali*, rock-salt, *S'irisha*-seeds and *Kushtha* pasted with the milky juice of an *Arka*, or *Snuhi* plant. An oil cooked in combination with *Kāsisa* (sulphate of iron), *Haritāla* (yellow orpiment), rock-salt, *As'vamādraka*, *Vidanga*, *Putika*, *Kritavedhana*, *Jambu*, *Arka*, *Uttamārani*, *Danti*, *Chitraka*, *Alarka* and *Snuhi*-milk, and used as an unguent, leads to the falling off of the polypus. 11.

Internal piles :—Now we shall describe the remedial measures which bring about the falling off of the invisible (internal) hæmorrhoids. The patient should take *Haritaki* with treacle every morning ; or a hundred *Haritakis* should be boiled in a *Drona* measure of cow's urine and the patient, observing a strict continence, should take with honey every morning as many of them as suit his constitution ; or he should be made to take every day a paste made of the roots of *Apāmārga* with the washings of rice and with honey. *S'atāvāri* pasted with an adequate quantity of milk or a *Karsha* measure of) the powders of *Chitraka* mixed with a copious quantity of good *Sidhu* wine, or a gruel (*Mantha*) (neither extremely thick nor thin), or powdered barley or wheat mixed with *Takra* and *Bhallātaka* powder, should be administered without any salt. A quantity of *Takra* should be kept in an earthen pitcher, plastered inside with a paste of *Chitraka* roots, and given to the patient in food and drinks whether fermented or not. A *Takra* should also be separately prepared as in the preceding manner with *Bhārgi*, *Āsphotā*, barley, *Āmalaka* and *Guduchi* and administered similarly ; this is called the **Takra-kalpa** (butter-milk compound). 12.

A medicated Takra should also be prepared with *Pippali*, *Pippali-mula*, *Chavya*, *Chitraka*, *Vidanga*, *Sunthi* and *Haritaki*, in the manner described above, (and given to the patient), who should abstain from taking any solid food, but live only on (this) Takra for a period of one full month ; or he should be given milk boiled with a decoction of *S'ringavera*, *Punarnavá* and *Chitraka*, or a condensed decoction (Phánita) of the bark of *Kutaja* roots mixed with an after-throw of the powdered drugs of the *Pippalyádi* group and honey. The patient should be made to partake of the medicinal compound known as the **Hingvádi-churna**,* described in the chapter on Mahá-Váta-vyádhi, and be made to live either on milk, or on Takra. As an alternative, he should take *Kulmásha* boiled in *Kshárodaka* (alkaline water) prepared from *Chitraka*-roots and made saline with a liberal after-throw of *Yava-kshára* ; or he should take milk boiled with the *Kshárodaka* (alkaline water) prepared from *Chitraka*-roots, or *Kulmásha* boiled with the alkaline water prepared from the ashes of burnt *Palása* ; or he should drink frequent potions of clarified butter mixed with the alkali made of the ashes of either *Patola*, *Apámarga*, *Vrihati*, or *Palásá* wood ; or drink Takra mixed with the Kalka of the roots of *Kutaja* and of *Vandáka* ; or take the alkaline water of *Putika* mixed with a Kalka of *Chitraka*, *Putika* and *Nágara* ; or use the clarified butter boiled in an alkaline solution† with the powdered drugs of the *Pippalyádi* group,

* In a preponderance of *Váyu* and *Kapha*, Takra should be taken as diet ; whereas milk should be taken in a case of the preponderance of vitiated blood.

† During the period when the above mentioned alkaline preparations are used, the diet of the patient should consist of clarified butter, milk and meat-soup for fear of the loss of the *Ojo-Dhātu*,

added to it by way of an after-throw ; or he should take every morning one or two Palas of black sesamum (according as required), with cold water. These measures prove remedial in cases of hæmorrhoids and tend to improve the digestion. 13.

Dantyarishta :—A Tulá weight* (twelve seers and a half) of the following drugs, *viz.*, *Das'a-mula*, *Danti*, *Chitraka* and *Haritaki* should be boiled with four Drona measures of water till reduced to one quarter part (one Drona). The decoction, thus prepared, should be cooled down, filtered, mixed with a Tulá measure of treacle and preserved into a receptacle which formerly contained clarified butter, which should then be kept buried for a month in a heap of unthrashed barley. At the close of this period an adequate dose of this preparation should be given to the patient every morning. This medicine proves beneficial in cases of hæmorrhoids, chronic diarrhœa (*Grahani*), jaundice, obstinate constipation of the bowels (*Udâvartta*) and in an aversion to food. It is also a good stomachic agent.

Abhayârishta† :—Two Pala weight of each of the following drugs, *viz.*, *Pippali*, *Maricha*, *Vidanga*, *Elavâlukâ* and *Lodhra*, five‡ Pala weight of *Indra-vârûni*, ten Pala weight of the inner pulps of the *Kapittha* fruit, half a Prastha measure (one Prastha is equal to two seers) of *Haritaki* and one Prastha weight of *Âmalaki*, boiled together with four Drona measures of

* Some are of opinion that one Tulá weight of each of the drugs should be taken ; but Gayadâsa does not say so.

† Charaka also reads this under the name of Abhayârishta.

‡ Experienced physicians recommend two and a half Pala weight of *Indra-Vârûni* in lieu of five Palas for its astringent taste. Charaka, however, recommends only "half a Pala."



water until reduced to one quarter of its quantity. This decoction should be filtered (through a piece of linen) and cooled down, after which two Tulá weight of treacle should be added to it. The whole preparation should be then kept in a receptacle which formerly contained clarified butter, and be kept buried half a month in a heap of unthrashed barley. After the lapse of the said period, the patient should be made to drink (an adequate quantity of) this preparation every morning according to his strength. This Arishta proves curative in cases of an enlarged spleen, impaired digestion, chronic diarrhoea (Grahani), Arśas, heart-disease, jaundice, cutaneous affection, ascites, Gulma, œdema (Sopha), and worms in the intestines, and improves the strength and complexion of the body. 14.

Anointing (Sneha-karma), fomentation, use of emetics and purgatives and the application of Anuvāsana and Asthāpana measures should be employed in cases of hæmorrhoids due to the action of the deranged Vāyu*. The use of purgatives is recommended in the Pittaja type; soothing or pacifying (Samsamana) measures in the Raktaja type; and S'ringavera and Kulattha in the type caused by the action of the deranged Kapha. All the preceding remedies should be combinedly employed when the concerted action of all the Doshas would be detected. As an alternative, milk boiled with the proper drugs may be administered in every case. 15.

Bhallātaka-yoga† :—Now we shall describe the mode of using Bhallātaka in cases of hæmorrhoids.

* Some are of opinion that the Rishis do not read this line. But as Gayadāsa explains it, so Dallana, he tells us, also does the same.

† A physician should apply this medicine after a due consideration and according to the physical condition of the patient.



A ripe and fresh Bhallátaka should be cut into two, three or four pieces and a decoction should be made of them in the usual way. The patient should be made to drink four Tolá weight of this cold every morning after lubricating or anointing his tongue, palate and lips with clarified butter, and should take his chief meal with milk and clarified butter in the afternoon. The number of Bhallátakas in preparing the decoction should be increased by one every day till the fifth day, (and the quantity of the decoction to be drunk by the patient should be similarly increased). After that, the number of Bhallátakas (and consequently the quantity of the decoction to be taken) should be increased by five every day. This method should be followed till the number of the Bhallátakas reaches **seventy**, after which it should be decreased every day by five until it is reduced to **five** Bhallátakas only (and five Śukti measures of the decoction). Subsequently the number of Bhallátaka (and the dose) should be diminished by **one** (and one Śukti measure respectively) every day, until it is reduced to the original **one** (and one Śukti measure). By taking a thousand Bhallátakas in this manner, one may get rid of an attack of any kind of Kushtha and Arsás, and, having become strong and healthy, may live for one hundred years. 16.

Other forms of Bhallátaka-yoga :—

The oil extracted from or pressed out of Bhallátakas, in the manner laid down in the chapter on Dvi-vrana, should be taken in a dose of one Śukti (four Tolás) every morning. The patient, as in the preceding case, should take his meal (of boiled rice, milk and clarified butter) after the digestion of the oil with a similar good effect. As an alternative, oil should be extracted from

the marrow of Bhallátakas and the patient, after cleansing his system with emetics and purgatives, etc., and regulating his diet in the order of Peyá, etc. should enter into a spacious chamber, protected from the blasts of the winds and take two Palas, or one Pala weight of the oil according to his strength. A meal of boiled rice, milk and clarified butter, etc., should be taken after the oil had been fully digested. The oil should be continued, in this way, for a month, the regimen of diet should be strictly observed for a period of three months and the patient should abstain from anger, etc., during this period. The use of this oil, in the above mentioned way, not only ensures a radical cure of the disease with all its complications, but would increase the duration of life to a hundred years with the glow of youth and health and with an increment in the powers of memory, retention and wisdom. The application of this oil for every one month will extend one's life for a period of one hundred years. In the same way a continuous use for ten months would enable him to live for a thousand years. 17.

Memorable Verses :—Vrikshaka (Kutaja) and Bhallátaka* prove as much curative in cases of all kinds of hæmorrhoids, as Kshadira and Vijaka are effective in cases of cutaneous affections (Kushtha). **Cauterization** with fire, or with an alkali, proves as much palliative in cases of external hæmorrhoids as **turmeric** proves soothing in those of Prameha. 18-19.

Medicated Ghritas, appetising drugs, electuaries, medicinal wines, Ayaskriti and Ásava should be prescribed in cases of hæmorrhoids, according to the nature and intensity of the Doshas involved

* Boiled with sixteen times of water in the event of the Bhallátaka being dry, otherwise with eight times of water only.



therein. Voluntary suppression of any natural urgings of the body, sexual intercourse, riding on horse-back, etc., sitting on the legs and such diets as would aggravate the Doshas, should be avoided in cases of hæmorrhoids. 20-21.

Thus ends the sixth Chapter in the Chikitsita Sthānam of the Sushruta Samhitā which deals with the medical treatment of Arsās.

CHAPTER VII.

Now we shall discourse on the medical treatment of urinary calculus, etc. (**Aśmari**). 1.

Metrical Texts :—Aśmari (urinary calculus, etc.) is a dangerous disease and is as fatal as death itself. A case of recent origin (acute) proves amenable to **medicines**, while an enlarged or chronic one requires **surgical operations**. The remedial measures, in the order of anointing, etc., should be employed in the first or incipient stage of the disease, whereby the entire defects with their causes (*i.e.*, roots of the disease) would be radically cured. 2.

Treatment of Vātaja Aśmari :—Clarified butter cooked with a decoction of *Pāśhānabheda*, *Vasuka*, *Vas'ira*, *As'mantaka*, *S'atāvāri*, *S'vadamstrā*, *Vrihati*, *Kantakārikā*, *Kapotavamka*, *A'rtagala*, *Kakubha**, *Us'ira*, *Kubjaka*, *Vrikshādani*, *Bhalluka*, *Varuna*, *S'āka-phala*, barley, *Kulattha*, *Kola* and *Kataka* fruits and with the Kalka of the drugs constituting the group of *Ushakādi*, speedily brings about the disintegration of As'mari (urinary calculi, etc.) due to the action of the deranged **Vāyu**. Milk, Yavāgu (gruel), a decoction, soup, or an alkali, properly prepared with the above Vāyu-subduing drugs should also be administered as food and drink in the above cases. 3.

Treatment of Pittaja Aśmari :—Similarly a medicated clarified butter cooked with the

* Chakradatta reads "Kopotavaktrā" in place of "Kapotavamka" "Kānchana" in place of "Kakubha"; and "Gulmaka" in place of "Kubjaka." From an examination of Dallana it appears that "Kachchhaka" is also a reading of "Kakubha."

decoction of *Kus'a*, *Kās'a*, *S'ara*, *Gundrā*, *Itkata*, *Morata*, *As'mabhid*, *S'atāvāri*, *Viddāri*, *Vārdhi*, *S'āli-mula*, *Tri-kantaka*, *Bhalluka*, *Pātālā*, *Pāthā*, *Pattura*, *Kuruntikā*, *Punarnavā**, *S'irisha*, with the paste (*Kalka*) consisting of *S'ilājatu*, *Madhuka* (flower) and the seeds of *Indivara*†, *Trapusha* and *Ervāruka*, would speedily bring about the disintegration of **Pittaja** *Aśmari* (calculi, etc.). An alkali, *Yavāgu* (gruel), soup, a decoction, or milk, properly prepared with the above *Pitta*-subduing drugs, should also be prescribed as food and drink in these cases. 4.

Treatment of **Kaphaja** *Aśmari* :—

The use of medicated clarified butter prepared from the milk of a she-goat† and cooked with the paste (*Kalka*) of the drugs constituting the *Varunādi* group‡, *Guggulu*, *Ela*, *Harenu*, *Kushtha*, the *Bhadrādi* group, *Maricha*, *Chitraka*, *Surāhvā* and the *Ushakādi* group, leads to the speedy disintegration and expulsion of the *Aśmari* (stone, etc.) due to the action of the deranged **Kapha**. So also the use of an alkali, *Yavāgu* (gruel), soup, milk, or a decoction, properly prepared with the above *Kapha*-subduing drugs, is recommended as food and drink in such cases. 5.

A potion consisting of the powdered fruit of the *Pichuka*, *Amkola*, *Kataka*, *S'āka* and *Indivara* mixed with treacle§

* Chakradatta reads "Punarnavē" i.e., both the kinds of *Punarnavā*.

† Jejjata explains "Indivara" as 'Nilotpala.' But Gayādāsa does not support this.

‡ Some say that "Aja-sarpīh" is superfluous. Chakradatta reads "गणे वरुणकादौ च गुग्गुल्लेलाहरेणुभिः" in place of "गणो वरुणकादिस्तु गुग्गुल्लेलाहरेणवः" meaning thereby that the decoction of the *Varunādi-gana* is to be used. Chakradatta's reading seems to be the correct one and is observed in practice with good results.—Ed.

§ The quantity of treacle, to be taken, should be equal to the entire quantity of the powders : and hot water should be used —Dallana.

and water proves beneficial in cases of **Gravel** (*S'arkará*). The bones of the Krauncha, camel and ass, as well as the drugs known as *S'vadamshtá**, *Tálamuli*, *Ajamodá*, *Kadamba*-roots and *Nágara* pounded together and administered through the vehicle of wine (*Surá*) or hot water, leads to the disintegration of *S'arkará* (gravel). The milk of an ewe mixed with powdered *Trikantaka*-seeds and honey should be used for seven days for the disintegration and separation of an *Aśmari*. 6-7.

Alkaline Treatments:—An alkali should be prepared from the ashes of the drugs used in the preparation of the aforesaid medicated clarified butters, by dissolving and filtering them in ewe's urine. The alkali should then be slowly boiled with an alkali similarly prepared from the dung of domestic animals, with the powders of *Trikatu* and the drugs of the *Ushakádi* group thrown into them as an after-throw. It proves curative in cases of stone, *Gulma*, and gravel. Alkalies† from burnt bark of sesamum, *Apámarga*, plantain, *Palás'a* and barley taken with the urine of an ewe destroy the gravel (*S'arkará*). As an alternative, the alkalies of *Pátalá* and *Karavira* should be used in the preceding manner. 8-9.

Two *Tolá* (*Aksha*) weights of the pastes of *S'vadamshtá*, *Yashti-madhu* and *Bráhmī* (mixed with ewe's urine) should be given to the patient; or the expressed juice of the *Edaká*, *S'obhánjana* and *Márkava* (with the said urine) should be given, or a potion consisting of the pasted roots of the *Kapotavamka* with *Kánjika*, or *Surá*, etc., should be administered. Milk boiled with the aforesaid drug (*Kapotavamka*) should be taken by a patient

* Some explain it as "Gokshura-seeds" and others as "Markataka-seeds."

† Four or six *Tolá* weight of an alkali should be dissolved and filtered for a number of times before use.



in case there is pain (in urinating). Milk boiled with *Triphalā* or *Varshābhū* should be administered as a drink and a decoction of the drugs of the *Vira-tarādi* group should be employed in all these cases.* 10.

A physician should have recourse to the following measures (surgical operations) in cases where the above-mentioned decoctions, medicated milk, alkalies, clarified butter and *Uttara-vasti* (urethral syringe) of the aforesaid drugs, etc., would prove ineffective. Surgical operations in these cases do not prove successful even in the hands of a skilful and experienced surgeon; so a surgical (*Lithotomic*) operation should be considered a remedy that has little to recommend itself. The death of the patient is almost certain without a surgical operation and the result to be derived from it is also uncertain. Hence a skilled surgeon should perform such operations only with the permission of the king. 11-12.

Modes of Surgical Operations :—The patient should be soothed (*Snigdha*) by the application of oleaginous substances, his system should be cleansed with emetics and purgatives and be slightly reduced thereby; he should then be fomented after being anointed with oily unguents; and be made to partake of a meal. Prayers, offerings and prophylactic charms should be offered and the instruments and surgical accessories required in the case should be arranged in the order laid down in the *Agropaharaniya* chapter of the present work (*Sutra-sthānam*, ch. V.). The

* *Dallana* recommends the use of *Triphalā* boiled with milk in cases of pain accompanying *Plttaja As'mari*, while that boiled with *Varshābhū* is advised to be given for the alleviation of pain in a case of *Vātaja* or *Kaphaja As'mari*. The drugs of *Vira-tarādi* group should be used with milk, clarified butter, a decoction, *Yavāgu* (gruel), food, etc., and also for bath, immersion, etc.

surgeon should use his best endeavours to encourage the patient and infuse hope and confidence in the patient's mind. A person of strong physique and unagitated mind should be first made to sit on a level board or table as high as the knee-joint. The patient should then be made to lie on his back on the table placing the upper part of his body in the attendant's lap, with his waist resting on an elevated cloth cushion. Then the elbows and knee-joints (of the patient) should be contracted and bound up with fastenings (S'átaka) or with linen. After that the umbelical region (abdomen) of the patient should be well rubbed with oil or with clarified butter and the left side of the umbelical region should be pressed down with a closed fist so that the **stone** comes within the reach of the operator. The surgeon should then introduce into the rectum, the second and third fingers of his left hand, duly anointed and with the nails well pared. Then the fingers should be carried upward towards the rope of the perineum *i.e.*, in the middle line so as to bring the stone between the rectum and the penis, when it should be so firmly and strongly pressed as to look like an elevated Granthi (tumour), taking care that the bladder remains contracted but at the same time even.

Prognosis-M. Text :—An operation should not be proceeded with nor an attempt made to extract the stone (S'alya) in a case where, the stone on being handled, the patient would be found to drop down motionless (*i.e.*, faint) with his head bent down, and eyes fixed in a vacant stare like that of a dead man, as an extraction in such a case is sure to be followed by death. The operation should only be continued in the absence of such an occurrence.

An incision should then be made on the left side



of the raphe of the perineum at the distance of a barley-corn and of a sufficient width to allow the free egress of the stone. Several authorities recommend the opening to be on the right side of the raphe of the perineum for the convenience of the operation. Special care should be taken in extracting the stone from its cavity so that it may not break into pieces nor leave any broken particles behind (i.e., inside the bladder), however small, as they would, in such a case, be sure to grow larger again. Hence the entire stone should be extracted with the help of an Agravaktra Yantra (a kind of forceps the points of which are not too sharp). 13.

Lithotomic Operation in a female :—

In a woman, the uterus (Garbhāśaya) is adjacent to the urinary bladder, hence the stone should be removed by making an oblique and upward incision, otherwise a urine-exuding ulcer might result from the deep incision in that locality. Any hurt to the urethra during the operation would be attended with the same result even in a male patient. An incision made only on one side of the organ in a disease other than that of stone, baffles all attempts at healing ; while an ulcer incidental to an incision made on both its sides, should be deemed incurable. An ulcer incidental to an incision made on either side of the bladder in extracting a stone might be healed up, inasmuch as medicinal potions and fomentations, etc., employed for the healing of a surgical wound, lead to the healing of the wound in the bladder ; secondly because the surgical opening is only made large enough for the extraction of the stone as recommended in the authoritative books ; and thirdly because an increase in the quantity of urine contributes to an increase in the size of the stone and hence a slight secretion of that

fluid or employment of diuretic Peyás, etc., are not attended with any injurious effects.

Post-Surgical Measures :—After the extraction of a stone, the patient should be made to sit in a Droni (cauldron) full of warm water and be fomented thereby. In doing so the possibility of an accumulation of blood in the bladder will be prevented ; however if blood be accumulated therein, a decoction of the Kshira-trees should be injected into the bladder with the help of a Pushpa-netra (urethral Syringe). 14-15.

Memorable Verse :—Stones and the accumulated blood in the bladder would be speedily expelled by means of injecting a decoction of the Kshira-trees into it with the help of a Pushpa-netra (urethral Syringe). 16.

For the clearance of the urinary passage, a treacle solution should be given to the patient ; and after taking him out of the Droni, the incidental ulcer should be lubricated with honey and clarified butter. A Yavágu, boiled with the drugs* possessed of the virtue of cleansing or purifying the urine, and mixed with clarified butter, should be given to the patient in a warm state every morning and evening for three consecutive days.

After that period a diet (meal) of rice well boiled and mixed with milk and a large quantity of treacle, should be given (to the patient) in small quantities for ten days for the purification of the blood and the secretion of urine as well as for the purpose of establishing secretion in the ulcer. The patient should be made to partake of a diet (of rice) with the soup of the flesh of Jángala animals and the expressed juice of acid fruits after the lapse of these ten days. 17.

* The urine-purifying drugs are the Trina-Panchamulas, Gokshura, Kásamarda, Pásháabheda, etc.



After that period, the body of the patient should be carefully fomented for ten successive days by applying any warm oleaginous substance or with any warm medicinal fluid (*Drava-Sveda*). As an alternative, the ulcer should be washed with the decoction of (the bark of) the *Kshira-Vrikshas*. A paste of *Rodhra*, *Madhuka*, *Manjishthá* and *Prapaundarika* (pounded together), should be applied then to the ulcer. A medicated oil or *Ghrita* cooked with turmeric and the preceding drugs should be applied to the ulcer. The accumulated blood in the affected part should be removed with the help of a *Uttara-vasti* (urethral Syringe). The ulcer should be cauterized with fire in the manner described before in the event of the urine not flowing through its natural passage after the lapse of seven days. After the urine takes its natural course, *Uttara-vasti*, *Asthápana* and *Anuvásana* measures should be employed with the decoction of the drugs belonging to the *Madhura-Varga*.

A seminal stone or gravel (*S'arkará*) spontaneously brought down into the urinary passage should be removed through the same passage. The urethra should be cut open and the stone should be extracted with a hook (*Vadīśa*) or any other instrument in the case of its not being expelled out by the passage. The patient should refrain from sexual intercourse, riding on horse back or on the back of an elephant, swimming, climbing on trees and up mountains and partaking of indigestible substances for a year even after the healing of the ulcer. 18

Parts to be guarded in Lithotomic Operations:—The *Mutra-vaha* (urine-carrying) and the *S'úkra-vaha* (semen-carrying) ducts or channels, the *Mushka-srotas* (cords of the testes), the *Mutra-praseka*



urinary) channels, the Sevani (the raphe of the perineum), the Yoni (uterus, vagina, etc.), the Guda (rectum) and the Vasti (bladder) should be carefully guarded at the time of performing a lithotomic operation. Death results in the event of the urine-carrying channels being in any way hurt during the operation owing to an accumulation of urine in the bladder. Similarly, any hurt or injury to the semen-carrying ducts at the time, results in death or in impotency of the patient; a hurt to the cords of the testes begets an incapacity of fecundation; a hurt to the urinary ducts leads to a frequent dribbling of urine; while a hurt to the Yoni (uterus, vagina, etc.), or to the raphe of the perineum gives rise to extreme pain. The symptoms which characterise a hurt to the rectum or to the bladder have been described before. 19.

Memorable Verses:—The surgeon who is not well cognisant of the nature and positions of the Marmas or vulnerable parts seated in the eight Srotas (ducts) of the body such as, the raphe of the perineum, the spermatic cords, the cords of the testes and the corresponding ones in females (Yoni), the anal region, the urinary ducts, the urine-carrying ducts, and the urinary bladder and is not practiced in the art of surgery brings about the death of many an innocent victim. 20.

Thus ends the seventh Chapter of the Chikitsita Sthānam in the Sus'ruta Samhitā which deals with the treatment of Urinary calculus.



SL

CHAPTER VIII.

Now we shall discourse on the medical treatment of Fistula-in-ano, etc., (**Bhagandara**). 1.

The disease admits of being divided into five different groups, of which the two, known as S'ambukāvartā and S'alyaja (traumatic), should be regarded as incurable, and the rest as extremely difficult to cure. 2.

The General Treatment:—The eleven* kinds of remedial measures commencing with Apatarpana up to purgatives (as described under the treatment of Dvi-vrana) should be employed as long as any fistular ulcer would remain in an insuppurated stage. The patient should be soothed by the application of medicated oil, etc., and his body should be fomented by immersing him in a receptacle of warm water, etc as soon as suppuration would set in (and even after the ulcer had burst). Then having laid him on a bed and bound his hands and thighs with straps as described under the treatment of Hæmorrhoid, the surgeon should examine closely as to where the mouth of the fistula is directed, outward or inward, and whether the ulcer itself is situated, upward or downward. Then the whole cavity or receptacle of pus (sinus) should be raised up and scraped out with an Eshani (indicator or probe). In a case of inter-mouthed fistula, the patient should be secured with straps (as before described) and asked to strain down. An incision should then be made by first directing the indicator when its mouth would become visible from the outside. Cauterization

* Apatarpana, Ālepa, Parisheka, Abhyanga, Sveda, Vimlāpana, Upanāha, Pāchana, Visrāvana, Sneha, and Vamana.

with fire or an alkali is a general remedial measure which may be resorted to in all the types of this disease. 3-4.

Specific Measures—M. Texts : In cases of the **Sataponaka** type all the small Vranas about the anus should be first incisioned and the principal sinus in the locality should not be looked after until these small ones had been healed up. The connected abscesses should be respectively incisioned on the external side, while the unconnected ones should not be opened at the same time in order that they may not run into one another and be thus converted into a wide-mouthed ulcer. The urine and the faecal matter are found in each case to flow out of the cavity of such a wide-mouthed ulcer ; and aching pains in the rectum and a rumbling sound in the abdomen, due to the action of the aggravated Vāyu, are experienced. Such a case is enough to confound even a well-read and experienced physician. Hence the mouth of a fistula of the **Sataponaka** type should not be opened with a broad incision.

Forms of incision :—An experienced surgeon should know that the **Lāngalaka**, **Ardha-Lāngalaka**, **Sarvatobhadra** and the **Gotirthaka** forms of incision should be the different shapes of incision, in a case of a many-mouthed **S'ataponaka**. An incision equal in its two sides is called the **Lāngalaka** (curvilineal), while the one with one arm longer than the other is named the **Ardha-Lāngalaka**. An incision made in the region of the anus in the shape of a cross (crucial) and a little removed from the raphe of the perineum, is called the **Sarvatobhadra** by men conversant with the shapes of surgical incisions. An incision made by inserting the knife in one side is called the **Gotirthaka** (longitudinal). All exuding (bleeding) channels in the affected region should be cauterized with fire by the surgeon.

A case of the *Sataponaka* type, occurring in a person of timid disposition or of delicate constitution, is extremely difficult to cure. Medicinal fomentations endowed with the virtue of arresting secretion and alleviating pain, should be quickly applied (to the seat of the disease). Fomentations with *Kriśará*, or *Páyasa* (porridge), made with the aforesaid *Svedaniya* (diaphoretic) drugs with a decoction of the drugs constituting the *Vilvādi* group, *Vrikshādanī* and roots of the castor-plant mixed and boiled together with the flesh of the *Láva*, *Vishkira* (a kind of bird) and that of animals living in swampy or marshy land or aquatic in their habits or *Grāmya* animals, and then kept in an oily pitcher and applied in the way of a *Nādi-Sveda* (fomentation through *Nādi* or pipe), should be at once applied to the seat of the ulcer. Sesamum, castor-seeds, linseed, *Māsha*-pulse, barley, wheat, mustard-seeds, salts and the *Amla-Varga* (see *Rasa-Vijnāniya* chapter) should be boiled in a saucer and the affected part or ulcer should be fomented therewith. After being fomented, the patient should drink (a potion consisting of) *Kushtha*, salts (the five officinal kinds of salts) *Vachā*, *Hingu* and *Ajamoda* taken in equal parts and mixed with (an adequate quantity of) clarified butter, grape-wine (*Mārdvika*), *Kānjika* (*Amla*), *Surá* or *Sauviraka*.* Subsequent to that, the ulcer should be wetted with the *Madhuka*-oil and the rectum should be washed with medicated oils which would alleviate pain due to the action of the deranged and aggravated *Váyu*. The preceding medicinal remedies tend to bring about the outflow or evacuations of stool and urine through their natural channels or courses, and undoubtedly alleviate all acute and supervening distresses which specifically mark

* By the use of this potion the digestive power is increased.

the progress of the disease. We have described the treatment of a case of fistula-in-ano of the Śatapona (sieve) type ; now listen to me about the treatment of the Ushtragriva (camel's neck) type of the disease. 5.

Treatment of Ushtra-griva :—The ulcer should first be searched with a probe or director and, after an operation, an alkali should be applied to it. To remove all sloughed off or sloughing flesh and membranes cauterization with fire is forbidden. [The fissures of pus (sinuses) and sloughed off flesh should be first drawn out]. A plaster of clarified butter and pasted sesamum should then be applied to it, and the ulcer duly bandaged. Clarified butter should be constantly applied over the bandage which should be removed on the third day. Cleansing or disinfecting (S'odhana) measures should then be used by the surgeon, according to the Doshas involved in the ulcer, and the successive healing (Ropana) measures resorted after its being properly purified (S'odhana). 6

Treatment of Parisrāvi :—In a case of the Parisrāvi (exuding) type, where there is bleeding and secretion from the ulcer, the sinus and the cavities of pus should be first removed and then cauterized with an alkali or with fire by an intelligent surgeon. The region of the anus should then be kept wet by the sprinkling of lukewarm *Anu-toila* (described in the chapter on Vāta-vyādhi). Warm plasters, or poultices, mixed with *Yavakshāra* and the urine (of a cow) should then be applied. Decoction of the emetic drugs as the seeds of *Madana*, etc.), should also be sprinkled slightly on the affected part. The ulcer when found to be softened and nearly free from pain and secretion (owing to the preceding measures) should be searched with a probe and the principal sinus should be cut open and again



completely cauterized with fire or with an alkali. The incisions should be made in the shape or form of a Kharjura-patra (leaf of the date-palm), Ardha-chandra (half-moon), Chandra-chakra (moon's disc), Suchi-mukha (needle's mouth), or Avámmukha (with downward mouth). After that the ulcer should be purified with mild cleansing or disinfecting remedies (as described above) 7.

In the case of an infant cauterization with fire or with an alkali, the use of strong purgatives and surgical operations are forbidden in the case of the disease (Bhagandara), whether outer mouthed or inter-mouthed. Medicinal remedies calculated to be mild, though keen in their efficacy, should be used in such cases. A plug or a Varti in the shape of a wick and made of powdered *Aragvadha*, *Haridrā* and *Kálā*, mixed with honey and clarified butter, should be inserted into the ulcer for purifying purposes. This medicinal compound speedily brings about the healing of a sinus, just as the wind will drive away a cloud. 8-9

Treatment of Ágantuka Bhagandara :—The sinus in a fistula of traumatic origin should be carefully cut open by a surgeon (with a knife) and cauterized, according to the rules laid down, with a red-hot Jambvoshtha (instrument) or with a red-hot director (*Śalákā*). Vermifugal remedies should be applied to it, and measures laid down in connection with the extraction of a *Śalya* from the body should be carefully resorted to. 10.

Treatment of Tridoshaja Bhagandara :—A case of Bhagandara, due to the concerted action of the three *Doshas*, should be treated without holding out any hope of recovery to the patient's people, or should be given up as hopeless. The measures and remedies mentioned above should be adopted in

succession in all types of Bhagandara. In the event of there being any pain in it, owing to the insertion of a knife or to any other surgical operation, luke-warm Anu-taila should be applied. As an alternative, the drugs possessed of the virtue of subduing the deranged Vāyu (Bhadra-dārvādi and Erandādi groups) should be boiled in a pot covered by a lid having a hole or aperture on its top; then the patient with his rectum anointed with oil, etc., should be made to sit in such a way over the said covered pot that the seat of the disease may be fomented with the warm fumes escaping through that aperture; or Nādi-sveda should be applied to the affected region through a pipe in a recumbent posture to alleviate the pain. As an alternative, a hot bath should be prescribed for the alleviation of the pain. **Śālvana Upanāha** (described in connection with the treatment of Vāta-vyādhī and that with the skins of the Kadali Mriga, Lopāka and Priyaka, should be applied to the affected locality to subdue the pain. A potion of the drugs or substances such as, *Trikatu*, *Vachā*, *Hingu*, salt (five kinds of salt) and *Dīpyaka*, should be administered with wine, *Kānjika*, *Sauviraka* and *Kulattha-Soup*, etc. 11-12.

Jyotishmati, *Lāngalaki*, *S'yāmdā*, *Danti*, *Trivrit*, *Tila*, *Kushtha*, *S'atāhṛd*, *Golomi*, *Tilvaka*, *Giri-karnikā*, *Kāsisā* and the two kinds of *Kānchana-kshiri*, compose the group which is possessed of the virtue of purifying (a fistular sore). (The decoction of these substances should be applied for the purification of the ulcer). The sore of a fistula may be filled (healed) up by the application of (a compound of) *Trivrit*, *Tila*, *Nāgādanti*, *Manjishthā* and rock-salt pasted together with milk and honey. A plaster (*Kalka*) consisting of *Rasānjana*, turmeric, *Dāru-haridrā*, *Manjishthā*, *Nimba* leaves, *Trivrit*, *Tejovati* and *Danti*



proves curative in a case of sinus. The drugs known as *Kushtha*, *Trivrit*, *Tila*, *Danti*, *Pippali*, *Saindhava*, honey, turmeric, *Triphalá* and sulphate of copper (*Tuttha*) are efficacious in purifying an ulcer. 13-16.

Oil* cooked (slowly) with *Pippali*, *Yashti-madhu*, *Lodhra*, *Kushtha*, *Elá*, *Harenu*, *Samangá* (*Baráha-krántá*), *Dhátaki* flower, *Sárivá*, the two kinds of *Haridrá*, *Priyangu*, *Sarja-rasa*, *Padmaka*, *Padmá-keś'ara*, *Sudhá*, *Vachá*, *Lángalíká*, wax, and *Saindhava* should be regarded as a potent remedy in healing up the ulcer and curing fistula-in-ano. This remedy proves beneficial in cases of scrofula (*Ganda-málá*), *Meha*, ulcers and in the *Mandala* type of cutaneous affections as well. The drugs which constitute the *Nyagrodhádi* group are efficacious in disinfecting (*Śodhana*) and healing up an ulcer. A medicated oil or *Ghrita* prepared with the preceding drugs proves curative in a case of fistula-in-ano. Similarly a medicated oil duly cooked and prepared with the roots of *Trivrit*, *Danti*, *Haridrá*, and *Arka*, as well as with *Vidanga*, *Triphalá*, milk of both *Snuhi* and *Arka*, honey and wax should be applied, as it is specifically efficacious in a case of *Bhagandara*. 17-19.

Syandana Taila :—Oil slowly cooked and prepared (in the manner aforesaid) with *Chitraka*, *Arka*, *Trivrit*, *Páthá*, *Malapū* (*Kákodumbara*), *Karavira*, *Sudhá* (*Snuhi*), *Vachá*, *Lángalaki*, *Saptaparna*, *Suvarchiká* and *Jyotishmati*, is called the **Syandana-Taila** and should be constantly applied in a case of *Bhagandara*. It is efficacious in purifying, healing and imparting a natural skin-colour to the cicatrix. A learned and experienced physician should adopt the remedial measures for this disease according to the procedure laid

* Four seers of oil, one seer of the drugs and sixteen seers of water should be taken at the time of preparation.



down under the treatment of Dvi-Vrana, when there is any ulcer (vrana) in existence. 20.

The bulb-like protrusion above the hole of the instrument (speculum), mentioned in connection with the treatment of Arsās, should be removed and the instrument, now in the shape of a half-moon, should be used by an experienced surgeon in the treatment of a case of fistula-in-ano. The patient should refrain from sexual intercourse, physical exercise, riding, anger, and the use of heavy and indigestible articles of food for a full period of one year even after the healing up of the ulcer in a Bhagandara. 21—22.

Thus ends the eighth Chapter of the Chikitsita Sthānam of the Sus'ruta-Samhitā which deals with the treatment of Bhagandara.



CHAPTER IX.

Now we shall discourse on the medical treatment of cutaneous affections in general (**Kushtha**). 1.

A cutaneous disease (Twag-dosha) originates through injudicious conduct of life such as, partaking of large quantities of unwholesome food, or taking it before the previously eaten one is digested (*i. e.*, eating too often), indulgence in incompatible articles of fare, voluntary suppression of the natural urgings of the body, and improper application of medicated oil, clarified butter, or other lardacious articles. It is attributed even to the dynamics of sinful acts done by a man in this or in some prior existence. 2.

Conduct of diet and regimen:—A person afflicted with any kind of skin disease should refrain from taking meat, lard, milk, curd, oil, *Kulattha* pulse, *Masha* pulse, *Nishpāva*, preparations and modifications of sugarcane juice, acid substances, incompatible food, meals taken before the complete digestion of the preceding one, unwholesome and indigestible food, or food causing a burning sensation and some kind of internal secretion, day-sleep and sexual intercourse. 3.

Regulation of diet and conduct:—The old and matured grain of *S'dli*, *Shashtika*, barley, wheat, *Koradusha*, *S'yāmāka*, *Uddālaka*, etc., boiled and taken along with the soup (*Supa*) or a decoction* (*Yusha*)

* An unsalted decoction of any substance not seasoned with any spices whatever is called **Yusha**, while the one salted and seasoned with spices is called **Supa**. In preparing the soup of any pulse, all husks should be carefully thrashed out and the grain should be slightly fried before boiling.



of either *Mudga* pulse or *Ādhaki* pulse mixed with *Nimba* leaves and *Arushkara* are wholesome in a case of *Kushtha*. Preparations of any of the aforesaid grains may be taken with *Manduka-parni*, *Avalguja*, *Atarushaka* and *Rupikā* flowers cooked in mustard oil or clarified butter, or with the soup prepared of the articles of the *Tikta-varga* (bitter group, mentioned in the *Sutra-sthānam*). The cooked flesh of *Jāngala* animals, devoid of all fatty matter, should be given to a patient, habituated to the use of meat diet. The medicated oil, known as the **Vajraka-Taila** should be used for anointing the body. A decoction of the drugs of the *Ārag-vadhādi* group should be used for rubbing (*Utsādana*) purposes. Decoctions of **Khadira** should be employed in drinks, baths, washes, etc. The preceding rules are intended to regulate the diet and regimen of one suffering from *Kushtha* (cutaneous affections). 4.

Preliminary Treatment :—In the premonitory stages of the disease the system should be cleansed by the application of both emetics and purgatives. When the disease is found to invade the **Tvak*** only, a plaster prepared of the purifying drugs should be applied to the affected parts ; blood-letting and the use of medicinal decoctions and purifying and disinfecting plasters are the remedies to be employed when the disease would appear to infect the **blood**. The same remedies and *Arishta*, *Mantha*, *Prása*, etc., should be employed when the disease would be found to have invaded the principle of the **Māmsa** (muscles). Palliation and temporary respite are the only cure that can be offered in a case of the sin-begotten type† of the

* *Tvak* here means *Rasa* or serum.

† The type of *Kushtha* affecting the principle of **Medas** (fat) is generally supposed to be sin-begotten.



disease which is the **fourth** (in order of enumeration) and that even is purely contingent on the willingness and capacity of the patient to conform to a strict regimen of diet, conduct and dress. Blood-letting and purifying measures (emetics and purgatives) should be resorted to in such a case and then the special medicinal remedies prepared from **Bhallátaka**†, **Silájatu**, **Guggulu**, **Aguru**, **Tuvaraka**, **Khadira**, and **Asana** and the **Ayaskriti** should be used in accordance with the prescribed rules. The disease in its **fifth** form (is found to invade the bones and) should be given up as incurable. 3-6.

Treatments of Doshaja Types:—In the first stage of **Kushtha**, the patient should be treated in accordance with the prescribed maxims (rules) of **Sneha-pána**. In a case of **Vátaja-Kushtha**, oil or clarified butter, cooked with (a decoction and Kalka of) *Mesha-s'ringi*, *S'wadamshtá*, *S'arngashtá*, *Guduchi* and the drugs included in the group of *Das'amula* should be used as drink and ointment. In cases of the **Pittaja** type, the patient should be made to drink (a potion consisting of) clarified butter prepared with (a decoction and Kalka of) *Dhavá*, *As'vakarna*, *Kakubha*, *Palás'a*, *Pichu-mardha*, *Parpataka*, *Madhuka*, *Rodhra* and *Samangá*. In the **Kaphaja** type, clarified butter cooked with (a decoction and Kalka of) *Piyála*, *S'ála*, *Áragvadha*, * *Nimba*, *Saptaparna*, *Chitraka*, *Maricha*, *Vacha* and *Kushtha* should be prescribed.

* **Bhallátaka**-preparations have been described in the treatment of **Ars'as**, preparations of **S'ilájatu**, **Guggulu**, **Aguru** and **Tuvaraka** in the treatment of **Prameha-pidaká**, and **Khadira**, **Asana** and **Ayaskriti** preparations in the treatment of **Mahá-kushtha**.

† Oil should be used in a case of **Kapha**-predominance, whereas clarified butter in that of **Pitta**-predominance. Others assert that clarified butter should be used for drinking purposes and oil for anointments.

The clarified butter cooked with (a Kalka and a decoction of) *Bhallátaka*, *Abhayá* and *Vidanga*, or (the medicinal oils known as) the *Tuvaraka Taila* and the *Bhallátaka Taila* should be used in all types of *Kushtha*. 7-8.

The Mahá-tikta Ghrita:—A paste or Kalka should be made by pounding equal parts of *Saptaparna*, *Áragvadha*, *Ativishá*, *Páthá*, *Katu-rohini*, *Amritá*, *Triphalá*, *Patola*, *Pichu-marda*, *Parpataka*, *Durálabhá*, *Tráyamáná*, *Mustá*, *Chandana*, *Padmaka*, *Haridrá*, *Upakulyá*, *Vis'álá*, *Murvá*, *S'atávari*, *S'árivá*, *Indra-yava*, *Átarushaka*, *Shadgranthá* (*vacha*), *Madhuka*, *Bhu-nimba* and *Grishtiká**. This paste (Kalka) should be cooked with four times its own weight of clarified butter, with the juice of *Ámalaka*, weighing twice as much as the clarified butter and with water weighing four times the quantity of the *Ámalaka* juice. It should be constantly stirred (with a ladle), while being cooked. This medicated Ghrita is called the **Mahá-tikta Ghrita**, which proves curative in *Kushtha*, chronic fevers, hæmorrhage, heart-disease, insanity, *Apasmára*, *Gulma*, postular eruptions, menorrhagia, goitre, scrofula, elephantiasis, jaundice, erysipelas, impotency, itches and *Pámá*, etc. 9.

The Tikta-Sarpíh:—Two Pala weight of each of the following drugs, viz., *Triphalá*, *Patola*, *Pichu-marda*, *Atarushaka*, *Katu-rohini*, *Durálabhá*, *Tráyamáná* and *Parpataka*† should be taken and boiled together in a *Drona* measure of water. The boiling should be continued till it is reduced to one fourth of its original quantity. Then half a Pala weight of each of the following drugs, viz., *Tráyamáná*, *Mustá*, *Indra-yava*, (red)

* Chakradatta does not read "Grishtiká" but read "Us'ira" instead. He also takes both the kinds of "Haridrá," of "Upakulyá" (Pippali) and of "Sárivá".

† Chakradatta reads "Nis'á" in addition to the above drugs.



Chandana, *Kirita* and *Pippali* should be pasted together. This pasted Kalka and the decoction should be cooked with a Prastha measure of clarified butter. The medicated Ghrita thus prepared is called the **Tikta-Sarpih**. Diseases such as *Kushtha*, chronic fever, *Gulma*, *Hæmorrhoids*, *Grahani*, edema, jaundice, erysipelas and impotency readily yield to the curative efficacy of this Ghrita. 10.

Medicinal Plasters for Kushtha:—

Having first soothed the patient with any of the preceding medicated clarified butters and having his body fomented, the surgeon should have recourse to the veni-section. One, two, three, four, or five *śirás* (veins) of the patient may be opened (according to the circumstances). The raised or elevated patches on the skin should be scraped off, or should be kept constantly covered with a medicinal plaster. As an alternative, the characteristic patches of the disease should be first rubbed with the substance known as the *Samudra-phena* or with the leaves of *S'āka*, *Goji*, or *Kākodumbāra* and a plaster (*Lepa*) composed of *Lākshā*, *Sarja-rasa*, *Rasānjana*, *Prapunnāda*, *Avalguja*, *Tejovati* and the roots of *As'va-māraka*, *Arka*, *Kutaja*, and *Ārevata*, pasted with the urine or bile of a cow, should be applied to them; or *Svarjikā*, sulphate of copper, sulphate of iron, *Vidanga*, *Agāra-dhuma*, *Chitraka*, *Katuka*, *Sudhā*, turmeric and *Saindhava* pounded together with the urine or bile of a cow should be applied to the diseased localities.

As an alternative, the alkali, prepared from the ashes of *Palās'a* wood in the prescribed manner, should be boiled with the powders of the preceding drugs; it should be removed from the oven after reducing it to the thickness or consistency of a *Phanita* and used in plastering (the diseased patches); or a plaster composed

of *Jyotishka* fruits, *Lākshā*, *Maricha*, *Pippali* and the leaves of the *Jāti* flower pasted together ; or a plaster composed of yellow orpiment, *Manah-s'ilā*, the milky juice of *Arka*, sesamum, *S'igru* and *Maricha*, pasted together ; or a plaster composed of *Svarjikā*, *Kushtha*, sulphate of copper, *Kutaja*, *chitraka*, *Vidanga*, *Maricha* and *Manah-s'ilā* pasted together ; or a plaster of *Haritaki*, *Karanjikā*, *Vidanga*, white mustard seeds, rock-salt, *Goro-chānā*, *Somarāji* and *Haridrā* pasted together should be applied to the diseased localities.

Metrical Text :—The preceding seven medicinal plasters are possessed of the virtue of destroying or curing *Kushtha* in **general**. Now hear me deal with the remedies to be **specifically** employed in cases of ringworm (*Dadru*) and leucoderma (*Śvitra*). 11.

Treatment of Dadru :—A plaster composed of *Kushtha*, mustard seeds, *S'ri-niketa*, *Haridrā*, *Trikatu* and the seeds of *Chakra-marda* and of *Mulaka* pasted together with *Takra* (butter milk ?) should be applied to the ringworm. The disease is found to readily yield to the curative efficacy of a medicinal plaster, composed of *Saindhava*, *Chakra-marda* seeds, treacle, *Kes'ara* (*Vakula*), and *Tārksa-s'aila* (*Rasānjana*) pasted together with expressed *Kapittha* juice. Preparations of *Hema-kshiri*, *Vyādhi-ghāta* (*Āragvadha*), *S'irisha*, *Nimba*, *Sarja*, *Vatsaka* and *Aja-karna* (a species of *Sarja*) should be used in cases of ringworm of a virulent type for baths (D. R. Drinks),* plasters and rubbing. 12.

Treatment of Śvitra :—In cases of *Śvitra* and *Pundarika*, the patient should be made to drink a lukewarm decoction prepared with equal parts of the

* In drinks or baths, a decoction should be used and in plasters and rubbings the ingredients should be pasted with *Takra* and the expressed juice of *Kapittha*.



roots of *Bhadra* (Udumbara) and *Malapu*. The use of this potion would produce blisters on the patches. These blisters should be treated, after their bursting, with a plaster (*Pralepa*) composed of the ashes of the burnt skin of leopards and elephants and made into a thin paste with (mustard) oil. A plaster composed of the insect known as the *Puti* and the *Kshára* (alkali) of *Áragvadha* should be found to be the best remedy for *Śvitra*. 13.

All kinds of *Śvitra* are found to readily yield to the application of a medicinal plaster made of the black ashes of a well-burnt cobra (*Krishna-Sarpa*) pasted with the oil of *Vibhitaka*. The white ashes of the said cobra mixed with one and a half time of its own weight of water should be filtered seven times in the manner of preparing an alkali. Mustard oil* should be cooked with this alkaline water weighing four times as much. An application of this oil proves curative in cases of *Śvitra*. 14.

The *Prapunnāda* seeds, *Kushtha* and *Yashti-madhu* should be pasted together with clarified butter. The plaster thus prepared should be given to a domestic white cock, purposely kept without food for a day and a half when it would evince any sign of hunger after the period. The dung of the said cock should then be collected after a full digestion of the said medicated drugs and applied as plasters on the affected patches for a month. It would bring about the cure (even) of internal† *Śvitra*s. 15.

Well burnt ashes of the dung of an elephant‡, mixed

* This is the best medicine for curing *Śvitra*.

† The internal *Śvitra*s are those under the blisters produced by the application of the remedy mentioned first in the list.

‡ *S'ivādāsa*, the commentator of *Chakradatta*, says that some read जलगण्डजे in place of गजगण्डजे in which case it would mean "S'amatha."

with elephant's urine, should be filtered several times (twenty-one times or seven times) after the manner of an alkaline preparation. A Drona measure of this alkaline solution should be boiled with the seeds of the *Somardji* weighing a tenth part thereof. This compound should be taken down from the oven as soon as it assumes a glossy hue and should then be made into boluses. Having rubbed the diseased patches of *Svitra*, a plaster of these boluses should be applied to them which would soon assume a healthy and natural complexion. 16.

The leaves and bark (*Dala-tvacham*) of the *Amra* (mango) and the *Haritaki** should be well soaked in a decoction of the same drugs (after the manner of a *Bhavaná-saturation*) and made into *Vartis* (*i.e.*, plugs). These *Vartis* should again be well soaked in the milky exudation of the *Vata* tree and lighted (with mustard oil) in a copper vessel used as an Indian lamp. The lamp black, thus produced, should be collected and well soaked in a decoction of *Haritaki*. *Kilása* (a particular kind of *Kushtha*) is destroyed, if rubbed with this preparation for several times after having been lubricated with mustard oil.† 17.

* According to some, both the leaves and bark of the "*Amra*" and of the "*Haritaki*" should be taken.

† The leaves and bark respectively of the *Amra* and the *Haritaki* should be taken in the preparation. The whole stanza seems to be of faulty construction. Dallana, in his commentary, says that some read the fourth line as "तैलेन सिक्तं कटुना समस्तमालिप्रयेदेवमुपैति शान्तिम् ॥" This seems to be a better reading. It removes the difficulty in the construction, but it omits also the word "*Kilása*" from the text. This, however, is also an improvement, inasmuch as this preparation seems to be a remedy for *Svitra* (which is only a variety of *Kilása*) like the preceding and the following ones; and it seems unlikely that *Susruta* would introduce a remedy for *Kilása* in general in the special treatment of *Svitra*.

A case of leucoderma would (undoubtedly) yield to the curative virtue of a medicinal plaster composed of *Somarāji* seeds, *Mākshika*, *Kākodumbara*, *Lākshā*, powdered iron, *Pippali* and *Rasānjana*, taken in equal parts and black sesamum equal to their combined weight, pasted with the bile of a cow and applied to the diseased patches. Similarly, a case of *Śvitra* would prove amenable to the application of peacock's bile, or of burnt *Hrivera* mixed with the said bile. 18.

Various types of *Śvitra* are cured with the application of either of the two following medicinal plasters. The first consists of *Tuttha* (sulphate of copper), *Haritāla* (yellow oxide of arsenic), *Katukā*, *Trikatu*, *Simha* (*Rakta-Sobhānjana*), *Arka*, *Karavira*, *Kushtha*, *Avalguja*, *Bhālātaka*, *Kshirini*, mustard seeds and *Snuhi*; and the second consists of the leaves of the *Tilvaka*, *Arishta* (*Nimba*), *Pilu* and *Āragvadha* pasted together with the seeds of the *Vidanga* and *Karavira* and *Haridrā*, *Dāruharidrā*, *Vrihati* and *Kantakāri*. 19.

Nila-Ghrita :—*Vāyasi*, *Phalgu* and *Tiktā* each weighing one hundred Palas, two Prastha measures of powdered iron, three Ādhakā (eight seers) measures of *Triphalā* and two Ādhaka measures of *Asana* should be boiled together with three Drona measures of water. This decoction should be taken down when reduced to one quarter of its original measure and cooked again with a quantity of clarified butter (weighing a quarter part of the former decoction) and with a Kalka consisting of *Indra-yava*, *Trikatu*, *Tvak*, *Deva-dāru*, *Āragvadha*, *Pārāvata-padi*, *Danti*, *Vākuchi*, *Keśarāhva* (*Vakula*) and *Kantakāri*. The patient should be made to drink this medicated clarified butter when the disease would be found to have attacked the **Dhātus** (fundamental principles of the organism), or to have become involved in the



aggravated **Doshas** of the system. The diseased patches should be rubbed with it, in the event of the affection being found to be confined to the *Tvak* (skin) alone. Even the type of *Kushtha*, commonly held to be incurable, has been found to prove amenable to the use of this medicated clarified butter, which is known as the **Nila-Ghrita**. 20.

Mahá-Nila-Ghrita :—A *Tulá** weight of the drugs known as *Triphalá*, *Tvak*, *Trikatu*, *Surasá*, *Madayantiká*, *Váyasi* and *Áragvadhá* and ten *Pala* weights of each of the drugs known as *Kákamáchi*, *Arka*, *Varuna*, *Danti*, *Kutaja*, *Chitraka*, *Dár-haridrá* and *Kantakátri* should be boiled together with three *Drona* measures of water. This decoction, boiled down or reduced to six *Prastha* measures, should be again boiled with the watery secretion of cowdung, cow's urine, milk, curd and clarified butter, each weighing an *Ádhaka*, and with the *Kalka* (weighing one-fourth as much of clarified butter) of *Bhu-nimba*, *Trikatu*, *Chitraka*, *Karánja*-fruit, *Niliká*, *S'yámdá*, *Avalguja*, *Pilu*, *Nilini* and *Nimba*-flowers. It is a curative for *Kushtha*. The rubbing of the diseased patches with this *Ghrita* imparts a healthy and natural colour to the skin in cases of *Śvitra* or white leprosy. It also cures diseases like *fislula-in-ano*, worms in the intestines and *Arsás*. It is known as the **Mahá-Nila-Ghrita**.† 21.

A compound consisting of cow's urine, *Chitraka*, *Trikatu* and honey should be kept for a fortnight in a

* A *Tulá* is equal to a hundred *Palas* or twelve *seers* and a half of our modern measure.

† *Dallana*, in his commentary, says that the two *Ghritas* (*Nila* and *Mahá-Nila*) seem to be spurious (*Anársha*). But he has included them in his commentary as *Jejjata* and *Gayadása* have read and explained them before him.



closed earthen pitcher which formerly contained clarified butter. A Śvitra-patient would do well to take this medicine after this period. He should also observe the rules of diet and regimen of a Kushtha-patient. The application of a Lepa (medicinal plaster), prepared by pasting the tender twigs of the *Putika*, *Arka*, *Snuhi*, *Āragvadha* and of the *Jāti* flower with cow's urine, would prove curative in cases of Śvitra, ringworm, ulcer, bad types of hæmorrhoids and sinus. 22-23.

In case the foregoing medicinal remedies prove ineffective, the patient should be duly bled for the purpose of letting out the vitiated blood from the system, and after sufficiently recouping his strength (after blood-betting) his body should be anointed with clarified butter. Copious vomitings should be induced with the help of strong emetics and the patient should be treated subsequently with a judicious administration of purgatives (so as to remove the aggravated Doshas from the system). The aggravated Doshas of the body, not being fully expelled from the organism of a Kushtha-patient by means of the preceding emetic and purgative measures, tend to extend all over the organism and the disease in consequence thereof is sure to lapse into one of an incurable type. Hence the aggravated Doshas should be fully eliminated from the organism. 24-25.

Emetics should be administered to a Kushtha-patient once a fortnight and Sramsana (purgatives) once a month. He should be bled twice a year though not profusely and medicated snuffs should be administered to him every fourth day. 26.

Internal application of *Haritaki*, *Trikatu* and treacle (prepared from the juice of the sugarcane) mixed with oil would lead to the early recovery of a case of Kushtha.

As an alternative, he should use a lambative medicinal compound of *Āmalaka*, *Aksha*, *Pippali* and *Vidanga* mixed with honey and clarified butter. Or he should take a Pala weight of *Haridrā* with an adequate quantity of cow's urine every day for a month in order to get free from Kushtha; or the same quantity of the fine powder of *Pippali* or of *Chitraka* should be given to him through the same vehicle and for the same period which would cure him of Kushtha. The same quantity of the fine powder of *Rasānjana* should be given through the said vehicle and in the same manner for a period of one month and the same should also be repeatedly applied externally. 27-28.

The bark of *Arishta* (Nimba) and *Sapta-parṇi*, *Lākshā*, *Musta*, *Das'a-muli*, *Haridrā*, *Dāru-haridrā*, *Manjishthā*, *Aksha*, *Vāsaka*, *Deva-dāru*, *Pathyā*, *Chitraka Trikatu*, *Āmalaki* and *Vidanga* taken in equal parts and pounded together should be mixed with powdered *Vidanga* weighing as much as the total weight of the preceding drugs; the patient should be made to take a Pala weight of this pulverised compound every day (for a month), or he should be made to drink (in adequate doses) a Drona measure of medicated clarified butter, cooked with the powders of *Triphalā* and *Trikatu*. As an alternative, *Aksha-pida* should be boiled in a Drona measure of cow's* urine. Clarified butter, cooked in this preparation may be used, as a remedy for Kushtha. An adequate quantity of old and matured clarified butter should be boiled with *Āragvadha*, *Sapta-parṇa*, *Patola*, *Vrikshaka*, *Naktamāla*, *Nimba*, the two kinds of *Haridrā* and *Mushkaka*. This medicated Ghrita,

* Cow's urine and water in equal parts should be taken according to some commentators. Dallana, however, recommends cow's urine only and no water.



thus prepared, would lead to the destruction of Kushtha.* 29-30.

Drugs such as *Rodhra*, *Nimba*, *Padma-kāshtha*, *Rakta-chandana*, *Sapta-parni*, *Aksha*, *Vrikshaka* and *Vijaka* should be administered in the bath† of the patient in the event of there being any burning sensation; or a potion consisting of honey and pasted *Tri-bhandi* (Trivrit) should be given to him. Old and matured Mudga, boiled in the decoction‡ of *Nimba* and mixed with oil, should be given to the patient as drink where sloughing would be detected in the diseased localities. A decoction of *Nimba* or that of *Arka*, *Alarka* and *Sapta-chchhada* should be given him if there be any worms in the diseased locality. The affected part of the body should be plastered over with the roots of the *As'va-māra* and *Vidanga*, pasted with cow's urine, in the event of its being eaten away by the worms. Cow's urine should be sprinkled over the diseased locality and all food (of the patient) should be given with the powders of *Vidanga*. 31-32.

As an alternative, the affected parts should be rubbed with the oil of *Karanja*, mustard, *S'igru*, or *Kos'amra*, or with an oil (any one of the preceding oils) cooked with (a decoction of) pungent, bitter and heat-producing substances. Measures laid down under the head of **Dushta-Vrana** (malignant ulcer) should be resorted to in a case where the aforesaid remedies would fail to produce any beneficial effect. 33.

* Dallana says that the authorship of this remedy should not be attributed to Sus'ruta, inasmuch as Jejjata does not mention it in his commentary.

† The drugs are to be boiled in water in which the patient should take his bath.

‡ The decoction should be prepared in the manner of "Shadanga-kalpa."

Vajraka-Taila :—The roots of *Sapta-parna*, *Karanja*, *Arka*, *Málati*, *Karavira*, *Snuhi*, *S'irisha*, *Chitraka* and *Ásphotá* as well as of *Visha* (aconite root), *Lángala*, *Vajrákhya* (mica), sulphate of iron, *Haritála*, *Manah-s'ilá* *Karanja*-seeds, *Trikatu*, *Triphalá*, the two kinds of *Haridrá*, white mustard-seeds, *Vidanga* and *Prapunnáda* should be pasted together with the urine of a cow. The paste thus prepared should be cooked in an adequate quantity of oil.* This oil known as the **Vajraka-Taila**, used as uguents, proves remedial to *Kushtha* etc., sinus and malignant ulcers in general. 34.

Mahá-Vajraka Taila :—The drugs and substances known as white mustard-seeds (*Siddhárthaka*), the two kinds of *Karanja*, the two kinds of *Haridrá*, *Rasánjana*, *Kutaja*, *Prapunnáda*, *Sapta-parna*, *Mrigádani*, *Lákshá*, *Sarja-rasa*, *Arka*, *Ásphotá*, *Áragvadha*, *Snuhi*, *S'irisha*, *Tuvara*, *Kutaja*, *Arushkara*, *Vacha*, *Kushtha*, *Vidanga*, *Manjishthá*, *Lángali*, *Chitraka*, *Málati*, *Katutumbi*, *Gandhāhvá*, *Mulaka*, *Saindhava*, *Karavira*, *Grihadhuma*, *Visha* (aconite), *Kampillaka*, *Sindura* (mercuric oxide), *Tejohvá* and sulphate of copper should be taken in equal parts and made into a paste. This paste (*Kalka*) should be cooked with either *Karanja*-oil or mustard-oil†, both of which have great curative potency, with double the quantity of cow's urine. It may also be prepared with sesamum-oil, but in this case four times as much of cow's urine should be taken. As an anointment it is undoubtedly efficacious in a case of *Kushtha* of whatsoever type as well as in cases of scrofula, fistula-in-ano, sinus and malignant ulcers. This oil is known by the

* S'ivadása, the commentator on *chakradatta*, asserts, on the authority of *Vágbhata*, that the oil should be sesamum-oil and it should be boiled with cow's urine.

† According to *Gayadása* mustard-oil should be used.



name of **Mahā-Vajraka** oil and is possessed of supreme and unquestionable efficacy. 35.

The drugs which constitute the *Lākshādī* group should be pasted with an adequate quantity of cow's urine and cooked* with sesamum-oil and mixed with Pitta (cow's bile). The oil, thus prepared, should be preserved for a week inside the body of a *Katukādvu*. The oil should be taken out (after this period) and the patient should use it both internally and externally (in an adequate quantity). After doing this, he should expose himself to the heat of the sun whereby all the Doshas would be eliminated from his organism. After the complete elimination of the Doshas from the system, the patient should be removed from the sun and bathed with a decoction† of *Khadira*, and a gruel, prepared with the decoction of *Khadira*, should be given him as diet. Similarly, oil or clarified butter boiled and prepared with the drugs constituting the *Sams'odhana* group (mentioned in chap. xxxix, Sutra.) or with the drugs possessing anti-Kushtha properties should be used as hot plasters and rubbings (in the diseased localities). Purgatives should be administered every morning with good results. The preceding remedies should be taken and continued for five, six, seven, or eight days, or till the Doshas of the system producing the disease are not perfectly eliminated. As an alternative, camel's urine and after its full digestion, camel's milk should be taken. Even parasitic types of Kushtha are sure to disappear within six months (under the course of this treatment). 36.

* In cooking the oil, cow's urine weighing four times of oil should be taken.—Dallana.

† The decoction of *Khadira* in the bath as well as in the preparation of the gruel should be prepared after the manner of *Shadanga-Kalpa*.—Dallana.

A Kushtha-patient desirous of being perfectly cured should constantly use preparations of **Khadira** in his drinks, food, bath, etc. Khadira, if properly used, is potent enough to curb the virulence of the disease in the same proportion as the latter is in invading the successive strata of the human organism and ultimately in bringing on the death of the patient. 37.

The paring of the nails and shaving the hair off, light physical exercise, the use of wholesome food, regularity in using medicines, abstinence from wine, women and meat-diet are the rules of conduct which should be strictly observed by a patient affected with Kushtha. With the strict observance of the above rules a Kushtha-patient may be expected to recover. 38.

Thus ends the ninth Chapter of the Chikitsa Sthānam in the Susruta Samhitā which deals with the medical treatment of Kushtha.



CHAPTER X.

Now we shall discourse on the medical treatment of major cutaneous affections (**Mahá-Kushtha**).* 1.

Metrical Text :—An intelligent physician should have recourse to the following medicinal compound; in virulent types of Kushtha, urinary complaints (Meha), diseases due to the action of the deranged and aggravated Kapha and general œdema of the body and also in respect of inordinately corpulent persons wishing to reduce their obesity. 2.

Mantha-Kalpas :—Pounded barley-corn should be saturated with the urine of a cow and kept in a large bamboo basket (Kilinja) for the whole night; and should then be dried in the sun on the following day. This process should be continued for seven consecutive days. At the close of this period it should be fried in an earthen vessel (Kapála) and then ground to fine powder (Śaktu). The powder, thus prepared should be given every morning to a person afflicted with Kushtha (leprosy), or any urinary complaint (Prameha) through the medium of a decoction of the drugs included within the *S'álasárádi* group, or of the *Kantaki* (thorny) † trees, and mixed with a pulverised compound of *Bhallátaka*, *Prapunnáda*, *Avalguja*, *Arka*, *Chitraka*, *Vidanga* and *Musta* weighing a fourth part of the **S'aktu**. Barley-corn should, in the same manner, be soaked in a

* Kushtha which affects the deeper tissues and fundamental principles of the body is called Mahá-Kushtha.

Gayi interprets the term "Mahá-Kushtha" as signifying those seven types of Kushtha which cannot be attributed to any detectable cause.

† Vadara, Kṛhādira, Arimeda, Snuhi, etc.

decoction of the drugs constituting the *S'āla-sārdādi* or the *Āragvadhādi* groups, or barley-corn should be given to a cow to eat and the undigested barley-corn passed with the cow-dung should be collected. This barley-corn should then be fried and powdered in the form of *Śaktu*. This powder should be mixed with a pulverised compound of *Bhallātaka*, etc., mentioned above, and given to the patient through the medium of a decoction of any one of the *Khadira*, *Asana*, *Nimba*, *Rāja-Vriksha*, *Rohitaka* and *Guduchi*, sweetened with honey and sugar, and acidified with grapes, or the expressed juice of pomegranate and *Amla-vetasa* and then mixed with rock-salt. This is the method of preparing all kinds of **Manthas**. 3.

Articles of food made of barley-corn in the form of *Dhānā*, *Lunchaka*, *Kulmāsha*, *Apupa*, *Purnakosa*, *Utkārikā*,* *Śashkulikā*, *Kunāri*† and *Konāli*, etc., should be given as diet. Preparations of wheat and *Venu-yava* (seeds of bamboo) after the manner of barley preparations should also be recommended as a proper food. 4 5.

Medicated Arishtas :—Now we shall describe the mode of preparing **Arishtas** (applicable in cases of *Kushtha*). Six Pala weight of each of the following drugs, viz., *Putika*, *Chavya*, *Chitraka*, *Deva-dāru*, *Sārivā*, *Danti* and *Trikatu*, and one Kudava weight of *Vadara* and *Triphalā* should be powdered. An earthen jar or pitcher, which formerly contained clarified butter, should be purified‡ and plastered inside with a compound

* Gayadāsa reads *Chitrā* (a kind of soup) before “*Utkārikā*.”

† Dallana does not read “*Konāli*” but says that some read “*Konālikā*” in place of “*Kunāri*” both of which are synonyms. We have, however, both the terms in our text.

‡ The jar should be purified or disinfected by fumigation with the medicinal drugs such as *Nimba-leaves*, *Guggulu*, etc.