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Leprosy in Ancient India*

TO THE EDITOR:

In India, the Sanskrit word "kustha" is used to denote leprosy. The word "kustha" occurs frequently in the Atharva Veda (c. 1400 B.C.), Kausika Sutra, and other Vedic texts, where it has been used to denote the plant *Cestus speciosus* or *C. arabicus* which grew in the mountains along with "soma" on the high peaks of the Himalayas. It is reputed to cure headache, diseases of the eyes, bodily affliction, fever and consumption and should not be confused with leprosy. In Maitrayani Samhita, "kustha" is used to mean a measure equal to one-twelfth. The term "kilasa" occurs in the Atharva Veda and the Vajasneyi Samhita and means white leprosy, in which the skin becomes spotted without ulcers, probably a type of tuberculoid leprosy.

References to "kustha" disease, identical

with leprosy, are available in Buddhist literature. Vinaya-pitaka mentions that men and women suffering from "kutta" (Sanskrit "kustha") were not eligible to get "upasampada" or admission into the order of monks. "Pabbaja" or going abroad was also prohibited for them. Vinaya-pitaka (Mahavagga) records that this was one of the five diseases prevalent among the people of the Magadha empire. Jain texts, "Acaranga" (6th century A.D.) and Vipaka-Sutra (12th century A.D.), also mention leprosy.

The etymology of the Sanskrit word "kustha" is "kusnati iti kustham" (from root "kus" + suffix "kthan") meaning that which tears asunder. "Kustha" finds mention in Santiparva and Anusasanaparva of Mahabharata. There is also a reference in the Puranas that Janamejaya was afflicted with leprosy as a consequence of having killed serpents. There is a belief that a man who killed a serpent in his past life suffers from leprosy in his next birth. Worship of serpents is, therefore, deemed to be auspicious for leprosy patients. Leprosy as a disease is also mentioned in Bhartrhari-sataka (c. 650

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A.D.) and Somadeva's Kathasaritsagara (c. 11th century A.D.). The relevant Sloka in the Srngarasataka is as follows:

Jātyandhāya ca durmukhāya ca jarājirṅākhilān-
gāya ca
Grāmīnāya ca duskulāya ca galatkusthābhībhū-
tāya ca
Yacchantīsu manoharām ni javapur laksmī-la-
vaśraddhayā
Panyastrīsu vivekakalpalatikāsastrīsu rajyeta kah

["who can be attached to prostitutes, who are like daggers to cut the divine creeper of discretion and offer their beautiful body for the lure of a little money even to a person born blind, a hideous fellow, an old man with withered limbs, a rustic, anyone born in a low family and to a leprosy sufferer with decaying limbs?"]

But much before this, "kustha" as a disease is described systematically with its causes and symptoms in Caraka-Samhitā. Caraka, according to tradition, was court physician to Emperor Kaniska (c. 78 A.D.), who is reported to have cured his wife of a critical disease. Caraka, in the fifth chapter of Nidanasthana of his famous work Caraka-Samhitā, which is alleged to have been originally written by Agnivesa and revised and updated by Caraka, quoting the authority of Atreya, lays down that three humors vāta (wind), pitta (bile), and ślesmā (phlegm), which have been disturbed, and four śarīradhātus, namely, tvak (skin), mamsa (flesh), sonita (blood), and lasika (lymph), which have been polluted, cause leprosy. The disease leprosy can be of seven, 18, or of infinite kinds according to the manner in which it has been classified. Caraka deals with seven varieties of leprosy, naming them kapala-kustha, audumbara, mandala-kustha, rsyajihva, pundarīka, sidhma, and kakanaka-kustha, and enumerates their special symptoms. According to him, kakanaka-kustha is incurable, while the rest respond to treatment and can be cured. The causes of leprosy given by him are, among others, a sudden change in food habits during the change of seasons, a sudden plunging into cold water when extremely tired or afraid or grieved, stifling nausea inside, eating hot and cold things without proper sequence, and indulging in sexual acts after overeating oily and rich food, etc. These disturb all of the three humors of the

body simultaneously, weakening the four śarīra-dhātus, and thus cause leprosy.

Caraka mentions the lack of perspiration or excessive perspiration, the roughness or extreme smoothness of the skin, colorlessness, itching, a pinching sensation, numbness, burning sensation, horripilation, heaviness, swelling, septic wounds and their non-healing, etc., as symptoms which often precede leprosy. If the curable type of leprosy cases are ignored, the ulcers become infested with worms which eat up the four śarīra-dhātus, nerves, sinews and cartilage. At this stage, the leprosy patient experiences bursting of nodules, piercing sensation, deformity and decay of limbs, fever, dysentery, and lack of appetite, etc. According to Caraka:

Sādhyoyam iti yah pūrvam naro rogam upeksate
Sa kiñcit kalam asadya mrta evāvabudhyate
Yastu prāgeva rogebhyo rogesu tarunesu ca
Bhesajam kurute samyak sa sukhamaśmūte

["A person who ignores the disease in the beginning, thinking that it would be cured, is known dead after a lapse of time. But he, who before the attack of the disease or at a time when the disease is in its infancy, starts proper treatment, remains happy for a long time."]

Susruta, who is said to be a disciple of King Divodasa of Varanasi, an incarnation of mythical Dhanvantari (physician of the gods), is the author of the Susruta-Samhitā. Susruta is believed to have lived before 600 B.C., although his extant work, by the evidence of style, language and contents, appears to be later than that of Caraka. Susruta holds leprosy to be of 18 varieties, 7 classified as mahā-kustha and 11 as ksudra-kustha. The seven mahā-kusthas (severe varieties of leprosy) are aruna, audumbara, rsyajihva, kapāla, kakanaka, pundarīka, and dadru. The less severe 11 varieties are named sthūlāruska, mahākustha, ekakustha, carmadala, visarpa, parispara, sidhma, vicarcikā, kitibha, pama, and rakasa, which are in fact mostly scaly diseases. Their diagnosis and clinical manifestations are given in detail in Susruta-Samhitā. The causes and symptoms of leprosy, as enunciated by Susruta, are generally the same as found in Caraka, with minor differences. Susruta also mentions kilāsa or leukoderma as a kind of leprosy.

Susruta holds that the progeny of leprosy sufferers are also prone to leprosy. He says:

Strīpūṁsayoh kushthadosād dustaṣonitaśukrayoh
Yadapatyam tayor jatam jneyam tadapi kushthi-
tam

["On account of the man and woman suffering from leprosy, their sperms and ova become infected and the child born out of their union is prone to leprosy."]

He also points out that kushtha is an outcome of the person's own foul deeds:

Brahma-strī-sajjana-vadha-parasva-haranadibhih
Karmabih pāparogasya prahuh kushthasya sam-
bhavam

["It is said that acts of killing a Brahmin, a woman or noble person and usurpation of other's money, etc., are responsible for leprosy, which is a disease born out of sins."]

Susruta says that a leprosy sufferer is afflicted by leprosy in his next birth also, until and unless, taking recourse to salutary food, good conduct, proper treatment, and penance, he gets rid of it. He refers to the contagious nature of the disease in the following verses:

rasaṅgād gātrasamsparśān niśvāsāt sahabhojanat
Sahaśayyāsanāccāpi vastramālyānulepanāt
Kustham jvaraśca śośasca netrabhisyanda eva ca
Aupasargikarogāśca sankrāmanti naran naram

["Leprosy, fever, consumption, diseases of the eye, and other infectious diseases spread from one person to another by sexual union, physical contact, eating together, sleeping

together, sitting together, and the use of same clothes, garlands and pastes."]

Kushtha or leprosy has been dealt with in a like manner in the later Ayurvedic texts like Mādhavanidana of Mādhavakara (8th century A.D.) and Bhāvaprakāśa of Bhāva Miśra (16th century A.D.), and there does not appear to be much originality in dealing with the disease.

Treatment of leprosy has been prescribed by the application of various herbal oils in Indian Ayurvedic medicine. Chaulmoogra oil (*Hydnocarpus*) and the purified esters of this oil were commonly used for hundreds of years until the mid 1940s, although their efficacy in the treatment of this disease has never been established. Modern therapy involves treatment by sulfone drugs and further breakthroughs have been made in the treatment of leprosy, which no longer remains an incurable disease if properly attended to in its initial stages.

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ENL in Histoid Leprosy

TO THE EDITOR:

Your attention is drawn to the occurrence of erythema nodosum leprosum (ENL) in histoid leprosy which has hardly been documented thus far in the literature. We recently had an established case of histoid leprosy⁽³⁾ on multiple drug therapy, comprising 100 mg each of dapsone and clofazimine and 600 mg of rifampin daily. In the course of treatment, the patient developed mildly erythematous, deep-seated mobile and tender nodules of the size of an almond located

over the extensor aspects of the extremities. They were associated with constitutional symptoms, namely, low-grade irregular fever with diurnal variation and fleeting joint pains.

Hematoxylin-eosin (H&E) stained sections from an ENL nodule revealed an intense infiltrate of polymorphonuclear leukocytes surrounding and/or infiltrating the blood vessels of the subcutaneous tissue. The blood vessel changes were, however, cardinal and consisted of marked edema and