

LITERATURE REVIEW AND COMPARATIVE STUDY OF KUSTHA W.S.R TO
LEPROSY

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ABSTRACT

Ayurveda is upaveda of Atharvaveda. Kushtha is described under Twak Roga in all samhitas and sangraha grantha. Twak Roga (Kuastha) is caused mainly due to Rakta dhatu dushti. The disease Kushtha is characterized by discolouration, loss of touch sensation, appearance of rashes, excessive or no perspiration etc. Kushtha is one of the most chronic disorders as described in Ayurveda. Chronicity of the disease develops deformity & makes the entire body ugly. According to Ayurveda literature, there are some specific etiological factors for kushtha. Like consumption of foods & drinks, which are mutually contraindicatory, liquid, unctuous & heavy. Suppression of natural urges especially vomiting. Indulging in misbehaviour acts like insulting Brahmins, teachers, elders & other respectfull persons, along with other sinful & heinous activities, etc. According to the involvement of dosha & dushya kushtha may be sadhya, krichchasadhya & asadhya. Most of the Ayurvedic texts categorise the kushtha Roga into two groups. Mahakushtha & Kshudraushtha which further divided into seven types & eleven types respectively. According to the modern aspect the disease Leprosy is identical to Kushtha. The objectives of the present review article include to discuss co-relation between kushtha roga (dermatological disorders in Ayurveda) with Leprosy & its etiopathogenesis, classification, clinical features & diagnosis.

KEYPOINTS: Kushtha roga, Mahakushtha, Kshudrakushtha, Leprosy.

INTRODUCTION

A disease that tears or pulls out & destroy the beauty of the body and any type of skin disease is called“ Kushtha ”. The condition in which skin produce discoloration & if not treated properly then ultimately results in disfigurement known as kushtha. Skin is one of the five *Gyanendriyas* which responsible for *Sparsh Gyan* or *touch sensation*. It is an outermost covering of the body, plays a chief role in maintaining barrier between internal and external environment. In addition, the healthy skin is the primary requirement for the beauty as well as having an attractive personality, which are the basic instincts of the human being. Any weakness at the skin becomes a great handicap for a person in the society, because it has a visible pathology. One of the most critical condition of skin among all skin diseases i.e. Leprosy or Hansen’s disease. It is a chronic non-fatal infectious disease caused by *Mycobacterium Leprae* (M.Leprae). The organism mainly affects the cooler parts of the body such as skin, mouth, respiratory tract, eye, peripheral nerves, superficial lymph nodes & testis. Other organs viz. Liver, spleen, muscles, bones & joints may get involved. Leprosy is a slow communicable disease and the incubation period between exposure & appearance of sign

of disease varies from 2-20 years (average about 3 years).

कुष्ठाति वपु इति कुष्ठम

The one which disfigures the body is kushtha.

त्वचः कुर्वन्ति वैवर्ण्यं दुष्टाः कुष्ठमुपन्ति तत् ।

कालेनोपेक्षितं यस्मात् सर्वं कुष्ठाति तद् वपु ।।

(अ.ह.नि.१४/३)

The disease in which there is discolouration of skin, putrific changes (Kushnati) happens in skin after a long period of time, such disease is *kushtha*.

Literary Review of Kushtha

Ayurvedic Review

Acharya charak was firstly described the disease separately named kushtha in nidana sthana and chikitsa sthana both. Acharya sushruta, has also described the disease kushtha in nidana sthana and chikitsa sthana. He has described the proper order of dhatu dushti.

Nidana Panchak

Nidan: The constant use of mutually incompatible eats and drinks or liquid. Unctuous and heavy articles of diet.

The suppression of generated urge for vomiting or other calls of nature, indulgence in exercise or exposure to heat after a surfeit meal, irregular indulgence in cold or hot food or fasting or over-eating, using of cold water suddenly after being afflicted with heat, fatigue or fear. Indulgence in pre-digestion meals, wrongfull administration of five purifactory procedures, habitual use of new grains, curd or fish. Excessive use of salt, or acid articles or of black gram, raddish, pasted articles, til, milk and gur. Sex act before the indigested food is digested, day sleep. The persecution of wise men and elders and committing sinful acts.

Purvaroop: Anaesthesia, hyperhydrosis, anhydrosis, discolouration, eruption or rashes, horripilation, pruritus, pricking pain, fatigue, exhaustion, excessive pain, rapid formation and chronicity or ulcers, burning sensation, numbness in the limbs.

Its premonitory symptoms are –roughness of skin, sudden horripilation, itching, excess or absence of sweat, numbness in body parts, spreading of wound and blackness of blood.

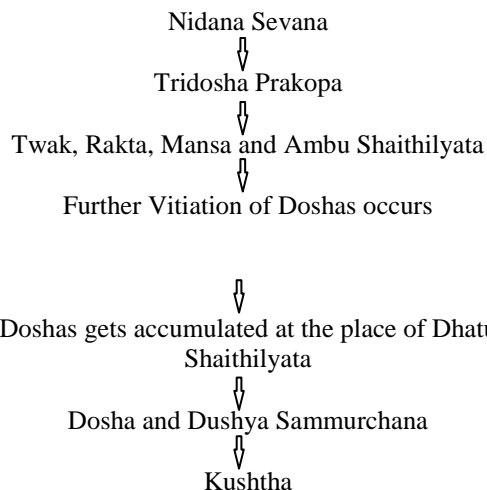
Samprapti (Etiopathogenesis)

वातादयस्त्रयो दुष्टास्त्वग्रक्तं मांसमम्बु च ।
दुषयन्ति स कृष्टानां सप्तको द्रव्यसंग्रहः ॥
न चैकदोषजं किञ्चित् कृष्टं समुपलथ्यते ॥
(च.चि.7/9-10)

Acharya Charaka described the seven dravyas, involved in the samprapti which are *Vata*, *Pitta*, *Kapha*, *Tvaka*, *Rakta*, *Mansa* and *Lasika*(*Ambu*). Charaka has emphasized the dual part played by *Nidana* i.e. simultaneous vitiation of *Tridosha* and also *Shaithilyata* in the dhatus such as *Tvaka*, *Rakta*, *Mansa* and *Lasika*. Thus the vitiated *Tridosha* gain momentum to vitiate shithil dhatus and hence the disease *kushtha* gets manifested.

Acharya Sushruta described that *Doshaja* and *Karmaja* Hetus leads to aggravation of *Pitta* and *kapha* which inturn produces *Avarana* of *Vata* and thus aggravation of *Vata*. Vitiated *Vata* enters into the *Tiryaka Siras* with two other vitiated *Doshas* and their spread leads further vitiation. Thereafter it reaches to *Bahya Rogamarga* (*Tvaka*, *Rakta*, *Mansa* and *Lasika*) and spread throughout the body, producing *Mandala* (rounded skin lesion) at

the gathering site of *Doshas*. If the *Doshas* are not treated properly at this stage, they enter into the deeper *Dhatus* of the body and produce complications.



Roopa

1. Vataja Kushtha.

Dryness, Atrophy, Prickling pain, Aching pain, Contraction, Dilatation, Hardness, Roughness, horripilation and Dusky red colouration are the signs and symptoms of dermatosis of *Vata* type.

2. Pittaja Kushtha.

Burning, Redness, Exudation, Suppuration, Smell of raw meat, Softening and sloughing are the symptoms of dermatosis of *Pitta* type.

3. Kaphaja Kushtha.

Whiteness, Coldness, Pruritus, Localisation, Elevation, Heaviness, Sliminess, eating away of the part by parasites and softening are the symptoms of dermatosis of *Kapha* type.

Classification of Kushtha

The *Kushtha* is generally described as *Tridoshaja Vyadhi* but type of the *kushtha* depends upon predominance of particular *Dosha*. Acharya Charaka mentioned that *Kushtha* may be *seven*, *eighteen* or *innumerable*(*Aparisankhyeya*) types. But almost all authors including Charaka divided *Kushtha* into two categories, *Mahakushtha* and *Kshudra Kushtha*, which further classified into seven types and eleven types respectively.

	Charaka	Sushrut	Vagbhat	Madhavnidan
Mahakushtha	1.Kapal	1.Kapal	1.Kapal	1.Kapal
	2.Udumber	2.Udumber	2.Udumber	2.Udumber
	3.Mandala	3.Aruna	3.Mandala	3.Mandala
	4.Rishyajihva	4.Rishyajihva	4.Rishyajihva	4.Rishyajihva
	5.Pundarika	5.Pundarika	5.Pundarika	5.Pundarika
	6.Sidhma	6.Dadru	6.Dadru	6.Sidhma
	7.Kakanak	7.Kakanak	7.Kakanak	7.Kakanak

Kshudrakushtha	1.Ekakushtha	1.Ekakushtha	1.Ekakushtha	1.Ekakushtha
	2.Charmakushtha	2.Kitibha	2.Charmakushtha	2.Charmakushtha
	3.Kitibha	3.Charmadala	3.Kitibha	3.Kitibha
	4.Vipadika	4.Pama	4.Vipadika	4.Vipadika
	5.Alasaka	5.Vicharchika	5.Alasaka	5.Alasaka
	6.Dadrumandal	6.Visarpa	6.Dadru	6.Dadrumandala
	7.Charmadala	7.Parisarpa	7.Charmadala	7.Charmadala
	8.Pama	8.Sidhma	8.Pama	8.Pama
	9.Visphota	9.Rakasa	9.Visphota	9.Visphota
	10.Shataru	10.Sthula	10.shataru	10.Shataru
	11.Vicharchika	11.Arushka	11.Vicharchika	11.Vicharchika
	12.Kachhu		12.Sidhma	12.Kachhu

Basis of classification includes

- Dosha Arambhata
- Uttarottar Dhatu Anupraveshata
- Lakshanas(clinical features)
- Chikitsa(Treatment)

On the basis of Dosha predominance

- Vataja
- Pittaja
- Kaphaja

On the basis of penetration in the particular Dhatu

- Rasagata
- Raktagata
- Mansagata
- Medogata
- Asthigata
- Majjagata
- Shukragata

Upadrava

प्रस्रवणमंगभेदःपतनान्यंगावयवानाम् ।
त्रुष्णा ज्वरातिसारदाहदौर्बल्याऽरुचिकाविपाकाच्च

It is in this condition that complications afflict the patient such as excessive discharge, ulceration of the part, sequestration of the body parts, thirst, fever, diarrhoea, burning, debility, anorexia and misdigestion such condition is to be regarded incurable.

SadhyaAsadhyata

साध्यं त्वग्रक्तमांसस्थं वातप्लेमाधिकं च यत् ।
मेदसि दवंन्दवर्जं याप्यं वर्ज्यं मज्जस्थिसंश्रितम् ।
क्रिमित्रुडदाहमन्दाग्निंसंयुक्तं यत् त्रिदोषजम् ।
प्रभिन्नं प्रसुतांगं च रक्तनेत्रं हतस्वरम् ।
पन्चकर्मगुणातीतम् कुष्ठं हन्तीह मानवम् ॥

- Kakanak Kushtha is incurable while rest of the Mahakushtha are curable.
- Kushtha having involvement of single dosha,Vatakapha predominant Kushtha is easily curable.
- Pitta-kapha,Vata-pitta predominant Kushtha and Medogata Kushtha have some bad prognosis and are difficult to cure.

- Kushtha roga with involvement of all three doshas, the patient is weak, having thirst and burning associated with krimi and asthi, majja and shukragata kushtha have very bad prognosis are incurable.

Management

Ayurveda has described 'Sanshamana' (Bio-purification), 'Sanshamana' (Pacification) and 'Nidanparivarjana'(Avoiding causative factors)as main therapy for many diseases including dermatologic disorders.

वातोत्तरेषु सर्पिमनं प्लेभ्मात्तरेषु कुष्ठेषु ।
पित्तोत्तरेषु मोक्षो रक्तस्य विरेचन चाग्र ॥
(च.चि.7 / 39)

- In the treatment of Kushtha, where vata is predominant, emesis (Vamana) should be done, pitta is predominant Blood-letting (Raktamokshana) should be done, after purgation(Virechana) is given to the patient, In dermatosis of minor types cupping should be done after making incision in the skin,and in major types venesection is beneficial.
- The external applications,which are used after thoroughly removing the vitiated blood from the lesions I those who have been administered, the purifactory procedure prove to be immediately effective.
- Acharya Sushrut and Yogaratnakar has explained Emesis (Vamana) to be done every 15 days, Purgation (Virechana) once in a month, Nasya every three days and Blood letting (Raktamokshan) once in six months to be done.
- Acharya Charaka described Sanshodhana to be done repeatedly in regular intervals in every dermatological disorders,so that toxins are removed from body without vitiation of vata and Dosha Dhatu samya can be formed for proper nourishment of skin.
- Acharya Charaka has also described use of Karanja, Mustard, Ingudi, Khadir oil for local application on Kushtha even medicated ghee made from Khadira, Neem, Patola are effective in pacification of Kushtha.
- Bathing with water boiled with above dravyas is also beneficial in Kushtha known as 'Siddharthak Snan'.

S.No.	Features	Lepromatous leprosy	Tuberculoid Leprosy
1	Skin lesions	Symmetrical, multiple, hypopigmented, erythematous, maculopapular or nodular (leonine facies). Diffuse skin & mucous membrane infiltration, nodules.	Asymmetrical single or a few lesions, hypopigmented & erythematous macular. Anaesthetic Patches
2	Nerves involvement	Present but sensory disturbance is less severe	Present with distinct sensory disturbance.
3	Histopathology	Collection of foamy macrophages or Lepra cells in the dermis separated from epidermis by a "clear zone".	Hard tubercle similar to granulomatous lesion, eroding the basal layer of epidermis, no clear zone
4	Bacteriology	Lepra cells highly +ve for lepra bacilli seen as 'globi' or "cigarettes-in-Pack" appearance.	Lepra bacilli few, seen in destroyed nerves as granular or beaded forms
5	Immunity	Suppressed (low resistance). Cell mediated immunity is absent-Poor.	Good immune response (high resistance). Cell Mediated -immunity-good
6	Lepromin test	-Ve	+Ve

Upshaya- Ahara: Laghu ahara, Tikta rasa, Puraan ghrata, Gomutra, Nimb-Haridra-Amalaki-Patol, Madhu, Jangal mansras.

Vihar: Laghu vyayam, Siddharthak snan, Abhyang, etc.

Anupshaya- Ahara: Virudh ahar (eg. Milk & fish), Navanna, Pishtanna, Vidahi, Abhishyandi, Dadhi, Til, Gud, Madhya, Lakuch, Anup mansras, etc.

Vihar: Divashayan, Mal-Mutra vega dharan, Ati vyayam, etc.

Modern Review

Leprosy or Hansen's disease (after discovery of the causative organism by Hansen in 1874) is a chronic infectious disease affecting mainly the cooler part of the body such as the skin, mouth, respiratory tract, eyes, Peripheral nerves, superficial lymph nodes & testis.

Though the earliest & main involvement in leprosy is of the skin & nerves but in bacteraemia from endothelial colonisation or by bacilli filtered from blood by spleen, bone marrow & regional lymph nodes are also involved. Advanced cases may develop secondary amyloidosis & renal disease, both of which are of immunological origin.

Causative organism

The disease is caused by mycobacterium leprae which closely resemble mycobacterium tuberculosis but is less acid-fast. The organisms in tissues appear as compact rounded masses (globi) or are arranged in parallel fashion like cigarettes-in-Pack.

Mode of Transmission:- Leprosy is a slow communicable disease & the I.P. between first exposure & appearance of signs of disease varies from 2 to 20 years (avg about 3 years).

Classification: Leprosy is broadly classified into main types.

1. Lepromatous type representing low resistance.
2. Tuberculoid type representing high resistance.

Complications

The extremities: complications of the extremities in leprosy patients are.

Primarily a consequence of neuropathy leading to insensitivity and myopathy. Insensitivity affects fine touch, pain and heat receptors but generally spares position and vibration appreciation.

- The most commonly affected nerve trunk is the ulnar nerve at the elbow, whose involvement results in clawing of the fourth and fifth fingers, loss of dorsal interosseous musculature in the affected hand, and loss of sensation in these distributions.
- Median nerve involvement in leprosy impairs thumb opposition and grasp, radial nerve dysfunction, although rare in leprosy, leads to wristdrop.
- Plantar ulceration, Particularly at the metatarsal heads, is probably the most frequent complication of leprosy neuropathy.
- Foot drop as a result of Peroneal nerve palsy *Charcot's joints*, Particularly of the foot and ankle may result from leprosy.

MATERIAL AND METHOD

Kushtha is one of the commonly affected illnesses to mankind. It has been mentioned in nearly all the Sthanas of Charak Samhita, which shows the prime importance in the diseases affecting human being. The disease is described in Charak Samhita after Prameha. In Charak Ni.8, Acharya has quoted, "Havi prashanamehakushthayoh". It indicates that Kushtha is a Santarpanajanya Vyadhi. Thus, it is understood that the etiology and pathogenesis of Kushtha is that of Santarpanajanya Vyadhis. In this part, literary review

about Kushtha will be collected from classical text of Ayurved thesis of previous research work, scientific journal, periodic magazines, monographs & other available source. Similarly modern review of the disease Kushtha will be collected from modern medicine books & various websites on internet.

AIMS AND OBJECTIVES

- To evaluate the clinical sign & symptoms according to Ayurveda as well as Modern medical science.
- To make out sapeksha nidana.
- To evaluate the laboratory test.

OBSERVATION AND RESULTS

A) Sign & symptoms- According to Ayurveda

Tvak vaivarnya
Utsedhyukt vrana
Sparsh gyan ka abhav
Aswedanam, Atiswednam

-According to Modern

Discolouration of skin
Growths(nodules) on the skin
Numbness of affected areas of the skin
Muscle weakness or paralysis
Enlarged nerves

B) Sapeksha Nidana

C) Laboratory & Radiological finding

DISCUSSION

Kushtha is 'Kulaj Vyadhi' i.e Hereditary it occurs in person having positive family history. Many causative factors have been described in classical texts. In today's era, unhealthy eating habits- Eating before first meal is digested, Intercourse after surfeit meal, Eating fruit salads, along with these classical cause 'Stress and Hereditary factors are mostly seen in manifestation of Kushtha. All the three doshas plays major role etiopathogenesis of Kushtha, but predominance of any one leads to classification of Kushtha in to Maha and

Kushudra. It has Bahudosh Avastha which causes severe Agnimandya brings Vaivarnyata to skin, affects the Manas and can even lead to krimi manifestation, Bahudosh Nirharan is contraindicated in Kushtha since the person is already weak due to severity of disease and it may lead to further debilitation of body or even death. So wise physician should protect strength of subject by eliminating the morbid dosha in small quantities repeatedly.

- Kushtha is one of the most dreadful disease afflicting man. A separate chapter under the heading "Kushtha" has been described, for skin diseases by our Acharyas. Almost all the Acharyas have further classified Kushtha into Maha-Kushtha and Kshudra-Kushtha. The exact differences between Maha-Kushtha and Kshudra-kushtha is often controversial. But in general, Maha Kushtha is considerably graver than Kshudra-Kushtha.
- Ayurveda has dealt with the diseases in all its aspects elaborately. The description of the lakshana of disease depends upon Dosh-Dushya sammurchhana and its effect on Srotasa and Predominance of Dosha and Dushyas
- Kushtha is always Tridoshaja in origin and a dominance of a particular Dosha leads to a specific symptom complex. It is Produced invariably by the vitiation of the seven factors viz. three Doshas and four Dushyas. But different types of pain, colours, etc are found in Kushtha because of Amshanshakalpana of the Dohas and Sarkhyavikalpa.

Sapeksha Nidana%

	कुष्ठ	विसर्प
1.	अविसर्पणशील	विसर्पणशील
2.	रक्तप्रधान दोष नहीं	रक्तप्रधान दोष
3.	वेदना अल्प या नहीं	प्रबल वेदना (षोणित दुष्टि) के कारण
4.	सप्त द्रव्यों की दुष्टि आवश्यक	सप्त द्रव्यों की दुष्टि आवश्यक नहीं
5.	ध्वरकारी	अधिकारी

Comparative Study of Kushtha W.S.R To Leprosy

S.No.	KUSHTHA	LEPROSY
1.	Tvak vaivarnya-shvetta, shyavata, arunta.	Discoloured patches of skin usually flat, that may be numb and look faded (lighter than the skin around)
2.	Utsedhyukt vrana, koth.	Growths (nodules) on the skin.
3.	Vrana-paak, kled, parishrav.	Painless, non-healing ulcers on the soles of feet.
4.	Sparsh gyan ka abhav, suptata.	Numbness of affected areas of the skin.
5.	Specific symptoms of kushtha - Aswedanam, Atiswedanam, Lomaharsha, Frequent visarpa.	Specific symptoms of Leprosy- -Muscle weakness or paralysis (especially in the hands & feet). -Enlarged nerves (especially those around the elbow, knee & in the sides of the neck). -Eye problems that may lead to blindness (when facial nerves are affected). -Nose disfigurement.

Laboratory Tests

No laboratory test alone is considered enough to diagnose leprosy.

Blood Test:- CBC, RBS, acid fast bacilli.

Skin Test - Lepromin Test, Skin Biopsy

CONCLUSION

Kushtha is one of the oldest known diseases to mankind. It is described as one of the most chronic disease in Ayurvedic system of medicine. Ayurveda described a wide range of dermatological disorders including its organ of communication with the external world, seat *saparshanendriya*. (organ responsible for touch sensation) and has an eternal relationship with *Mann*. Therefore, any type of psychosocial stress, directly or indirectly involved in the manifestation and or exacerbation of dermatological disorders. In the present era, stress and altered immunity are the major factors responsible for the manifestation of a wide range of dermatological disorders. The pharmacological and non-pharmacological measures for the management in dermatological disorders as described in Ayurveda are good immune- modulators and anti-stress agent. Therefore, these measures, when used properly are cost effective and provide management in natural way with no or adverse effects.

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