



Review Article

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A RATIONAL AYURVEDIC APPROACH TO DIAGNOSIS AND MANAGEMENT OF KILAASA (VITILIGO): A REVIEW

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ABSTRACT

The description of Kilaasa dates back 3,518 years ago. It is mentioned in Vedic texts like Atharva-veda (1500 BC) and Manu-smriti (1250 BC - 1000 BC). Etiopathology, symptoms and management of this disease is mentioned in all major samhitas, manusmriti, Atharva-veda, dermatology textbooks. It is a non-contagious skin disease characterized by whitish patches on the body. Shrit, Darun and Aruna are its synonyms. Incompatible diet, excessive sun exposure and inapt social behaviour are mentioned as causes of *Kilaasa* in ayurveda literature. However, exact cause of Kilaasa remains unknown until date. In this disease, aggravated three doshas (bodily humors) vitiate rakta, maamsa and meda dhatu of the affected skin. Three sub-types of Kilaasa are based on colour of the patch. Shodhana and shamana are principal treatments of Kilaasa. Under the shodhana therapy, three processes are described for this disease. Vamana (emesis) and virechana karma are mentioned in all three samhita of brahmatrayi while Raktamokshana has been advocated in *Astang Hridaya* only. Ayurvedic etiology, pathology and treatment of the Kilaasa are similar of the maha kushtha and kshudra-kushtha. The symptoms are similar to the Vitiligo described in the modern text.

Keywords: Kilaasa, shvitra, vitiligo, leukoderma

INTRODUCTION

Kilaasa means 'leprous' or 'a kind of spotted deer' or a white leprous sport or a species of leprosy (resembling the so-called white leprosy in which the skin becomes spotted without producing ulcer)¹. According to Amarkosh, Kilaasa is white Kotha². Kotha means patch (circumscribed flat discoloration, larger than 0.5cm). The word 'svitra' has its root in the Sanskrit word 'seta', which means white patch. Svitra means whitish or morbid whiteness of the skin or vitiligo³. Shvitra is synonym of Kilaasa. It is mentioned in Vedic texts like atharva-veda (1500 BC) and Manu-smriti (period of around 1250 and 1000 BCE).

Kilaasa is commonest skin disease characterized by pink-whitish or coppery-white or pale colored patches all over body, without pain and secretions. It is also known as Daaruna, aruna and shvitra⁴. Based on clinical equivalence it seems to be equivalent of Vitiligo (leukoderma) mentioned in modern medical literature.

Vitiligo, a type of skin disease is a common acquired disorder characterized by milky white macules (circumscribed flat discoloration, smaller than 0.5cm) or patches (circumscribed flat discoloration, larger than 0.5cm) on the body. The melanocytes of epidermis are gradually destroyed causing hypo-pigmented, depigmented area on skin. Although it is not harmful as such, it certainly affects the quality of life of an individual as a lot of psychosocial stigma is attached to it.

Worldwide incidence of vitiligo is 1% and 3%-4% population of India is affected by it⁵. Male and female are affected equally. It may occur at any age.

There are three sub-types of Kilaasa. In clinical practice, distinction is made on basis of appearance of patch. As disease becomes chronic, the patient develops other features like hairs of affected part becoming coppery in colour and patches becoming knotted with each other. In such condition it becomes incurable otherwise it may be treated by ayurvedic therapies. Shodhana (bio-purification/ detoxification) and Shaman (conciliation therapies) are mainstay of treatment of Kilaasa. Bakuchi is the drug of choice in Kilaasa. Exposure to sunlight plays a key role in management of Kilaasa.

Historical Description

According to Atharvaveda (1500 BC), this disease is caused due to deficiency of pitta dosha in skin and vitiation of maamsa, meda and asthi dhatu⁶. In the first kaanda of Atharvaveda, two types of shveta kushtha are described as Kilaasa and Palita. Dry red patches characterize Kilaasa and white patches all over body characterize palita⁷. In the vivaha vidhana chapter of Manusmriti (1000 BCE), marriage is prohibited from 10 wrongdoing girls. In these 10, the marriage is prohibited to the shvitra girl⁸.

In Ayurvedic literatures, the Kilaasa is described with kushtha because of apparent similarity of aetiology and management to mahaa-kushtha and kshudra-kushtha but it is not included in seven maha-kushtha and eleven kshudra-kushth. According to Sushrut Samhita, Kilaasa is limited to the skin only. It cannot reach deeper level and is devoid of secretions⁹. This is main difference between Kilaasa and kushtha¹⁰. According to Kashyapa samhita (6th century BC), Shvitra is 'shweta bhava micchanti switra' i.e. reflection of white colour. Kilaasa is stated to be rakta, maamsa and medadhatugat, tridoshaja skin

disease by Charaka Samhita. Location of the Kilaasa is considered fourth layer (*Tamra*) of *twacha* (~skin)¹¹.

Etiological Factors

Dietary causes

1. Excessive intake of liquid and heavy foods for a very long time
2. Negligence normal orders and rules of diet
3. Excessive eating in the condition of indigestion
4. Excessive intake of new grain, curd, fish, sesame seed, salty and sour food, milk, jiggery, sweets¹²

Physical causes

1. Suppression of the natural urges specially vomits.
2. Severe physical exercise in excessive heat and after taking very heavy meal
3. Panchakarma vyapad (incorrect application of body purification therapy)
4. Drinking cold water or having cold bath immediately after direct contact of heat¹³
5. Having coitus in a state of indigestion
6. Daytime sleep¹⁴
7. Genetic factor¹⁵

Specific causes

Dietary causes

Dietetic incompatibility¹⁶ (eating fish with milk or sour fruits with milk for long time)

Physical causes

Untruthfulness and ungratefulness¹⁷.

Improper social behavior like insulting to the teachers and saints¹⁸, bad deeds of the past life¹⁹, excessive exposure to sun²⁰

Etiology according to Modern text

1. Genetic factors
2. Autoimmune
3. Excessive sunlight exposure

Exact cause of vitiligo remains un-known. Self –destruction of melanocytes is hallmark of pathogenesis, but cause of this phenomenon is still unknown.

Classification

There are three sub-types of Kilaasa on basis of color of the patch. According to the Charak Samhita, three sub-type of Kilaasa are due to vitiated doshas (bodily humors) and dhatu. All three doshas (bodily humors) are vitiated in three sub-types of Kilaasa.²¹

1. Red patches are due to vitiation of doshas (bodily humors) reaching at level of rakta dhatu.
2. Coppery patches are due to vitiation of doshas (bodily humors) reaching at level of maamsa dhatu.
3. White patches are due to vitiation of doshas (bodily humors) reaching at level of meda dhatu.

According to the Sushrut samhita, three sub-type of Kilaasa i.e. *vataj* Kilaasa, *pittaj* Kilaasa and third sub-type *kaphaj* Kilaasa occur due to dominance of single dosha²²

1. *Vataja* Kilaasa: rough and coppery colour, round patches
2. *Pittaj* Kilaasa: patches resemble colour of lotus petal with burning sensation
3. *Kaphaja* Kilaasa: smooth, white patches in large size with itching

According to the Ashtanga Hridaya *Kilaasa* originates from three doshas (bodily humors) (*vata*, *pitta* and *kapha*) and three dhatus (*rakta*, *maamsa* and *meda*). There are three types of this skin disease due to separate vitiation of doshas (bodily humors) and tridhatu.

1. *Vataja* Kilaasa: dry and light red patches due to *vata* dosha predominance in *rakta* dhatu.
2. *Pittaja* Kilaasa: characterised by itching and loss of hair on *tamra* patches (copper / lotus petal like skin lesions) due to *pitta* dosha predominance in *mamsa* dhatu
3. *Kaphaja* Kilaasa: itching present in white patches due to aggravated *kapha* dosha localized in *meda* dhatu

Three types of the Kilaasa described in *Madhav Nidana* same as *Ashtanga Hridaya*.

Table 1: Types of Kilaasa

Sub-type	A.H.Ni.14/38-39 ²³	Su.Ni.5/17	Ch. Chi.7/174 ²⁴
Reddish-white	Dry	Dry, dusty, rounded patches	Due to <i>dosha</i> reaching at level of rakta dhatu
Pink-light reddish white	Burning sensation, destruction of hair on patches	Burning sensation present on patches	Due to <i>dosha</i> reaching at level of mamsa dhatu
White	Thick, heavy patches and itching present	Smooth, slightly raised over the skin surface with sensation of itching	Due to <i>dosha</i> reaching at level of meda dhatu

Table 2: Types of Kilaasa

Samhita	Reddish-white	Pink-light reddish white	White
A.H.Ni.14/38-39	Aruna	Kamal patra (~lotus petal)	Shveta
Su.Ni.5/17	Aruna	Padhm patra (~lotus petal)	Shveta
Ch. Chi.7/174	Rakta patch	Tamra	Shveta

Based on symptoms, Kilaasa is almost similar to the *Sidhma maha-kushta*. However, patches of the *sidhma kushta* are often on the chest region and minute dead skin particles are produced on the rubbing the patch. This does not happen in Kilaasa. Depending on this, Kilaasa can be differentiated by *sidhma kushta*.

Prognosis

The three types of Kilaasa viz. *raktam*, *tamram* and *shwetam* are difficult to treat in succession. Later one is more difficult to cure than the previous one.²⁵

Incurable Kilaasa

1. When patches are knotted with each other in multiple formation
2. When colour of hair of affected part becomes red
3. When the patient is suffering from this disease for one-year duration²⁶
4. When it is formed as an after effect of skin burn according to *Sushrut samhita*

Treatment

Management of the Kilaasa is almost similar to the kushtha. Shodhana and Shamana are mainstay for treatment of *Kilaasa*.

Shodhana therapy: There are three main vama (emesis), virechana and raktamokshan) shodhan therapies in Kilaasa disease. Smoothened doshas (bodily humors) will be liquefied and mobilized to koshtha (~intestine) by snehna (oleation) and swedana (fomentation) which can be easily eliminated by vama (emesis) and virechana (purgation). Raktamokshan (bloodletting) therapy is blood-cleansing therapy. It is prime process of blood detoxification. It is useful in vitiation of the *raktadhtu*.

Shamana therapy: Most of drugs used in treatment of Kilaasa are tikta (pungent), katu (bitter) rasa dominant and ushna (hot) in virya (potency). Tikta rasa itself is kushthagna (able to cure dermatological afflictions), vishaghna (antidote to endogenous toxins), kandughna (anti-pruritic), and twak-mamsasathiarakar (stabilizers of skin and muscles). Ushna virya is helpful in reproduction of ushna property of the pitta. This property is useful in reproducing melanin pigments. These melanin pigments are responsible for skin colour.

Shodhana

Snehapana (~lubrication)

Mahaavajraka ghrita²⁷, Panchatikta ghrita are ideal choice for Snehana as Kilaasa is mentioned as one of their specific indications.

Ghrita is given for internal use in increasing quantities for a minimum of 3 days and up to 7 days or till appearance of samyaka snigdha lakshana (physical signs of appropriate oleation). Initial dose of ghrita is 30 ml which is further increased in geometric progression on subsequent days. Before the snehapana, deepana-pachana (digestive stimulant) medicine is given for 2 to 5 days to clear of ama (endogenous toxin). During the snehapana, lukewarm water and light diet, steam bath on the whole body are specific precautions to be followed. Due to snehapana and

swedan (~ fomentation), aggravated doshas (bodily humors) are liquefied and mobilized to enter koshta (~upper and lower intestine).

Vamana (~bio purification through oral route)

Any of 52 yoga of Kritavedhan (dose-1 fruit)²⁸, Madana phala (dose-antamakhmushthi), leaves of Patola with Nimba juice²⁹

In addition, other vama yoga may be administered for vama (emesis) karma.

Vamana (emesis) Process

2-3 litres of milk is given to the patient followed by vama yoga. (3 g Madana phala powder +1 g rock salt+ honey). Emesis starts within 30 to 45 minutes. vama(emesis)a(emesis)opag dravya (herbs that facilitate vomiting) e.g. Yashtimadhu phanta (hot infusion of *Glycyrrhiza glabra*) is given along with. As soon as samayak yoga (symptoms of proper emesis) appear, stomach is cleaned by lukewarm water mixed with pinch of rock salt. Dhoomvarti (medicated smoke) is given afterward to clear of any remnant kapha dosha.

Virechana (~bio purification though anal route): Juice of *Kaakodumbarika* along with jaggery³⁰ is drug of choice for this purpose.

After administration of this virechak Drava, the patient should expose himself to the heat of sun. This will cause purgation. After virechana, the patient will feel thirsty, for which he should be give peya (rice water) for three days. When pustules appear, it should be punctured with thorn.

Aggravated doshas (bodily humors) located in the koshtha is exited from the body through vama (emesis) and virechana (purgation) process.

Raktmokshana: repeated bloodletting³¹

Shamana (pacification therapies)

Single drugs: Bakuchi seeds, Neem bark, Chitraka root³², Sasyaka³³, Go-mutra, Hasthi-mutra (urine of elephant).

Table 3: Properties and doses of the drugs used for Kilaasa skin disease

Drug/metal	Ras	Vipak	Guna	Virya	Use form	One dose
Baakuchi seeds	Katu Tikta	Katu	Kapha medahara	Ushna	Internal, external	3g
Chitraka root		Katu	laghu, ruksha	Ushna	use for local application	-
Nimabbark	Tikta	Katu	Laghu	Ushna	Internal, external	3g
Sasyaka (CuSO ₄ 7H ₂ O)	Katu kshariya	Katu	Laghu	Ushna	Internal use with herbal drug	15-30mg
Go and Hasti mutra	-	-	Tikshna	Ushna	Mixed with powder of drug for Local application	-

Bakuchi seeds: Active principle part is psoralen. Psoralen has the ability to produce melanin pigments³⁴ **Nimba** : Neem bark's action on the skin is like Baakuchi³⁵.

Go and Hasti mutra (cow and elephant urine)³⁶: Increase of bhrajak pitta in skin due to tikshna ushna properties of this urine. When the increase of bhrajak pitta in skin then increases the absorption property of ointment/ oil and starts to proper formation of melanin pigments.

Table 4: Aushadha yoga (combination drugs) for internal use

Yoga kalpana	Yoga	Composition of yoga	Dose/ Anupana	Reference
Churna (Powders)	Baakuchi churna		3g with Khadir / Amalki kwatha	Vangsen kushtha rogaadhikara / 297
Kwatha/ kashaya (Decoctions)	Khadir kwath		48 ml BD	Vangsen kushtha rogaadhikara / 277
	Patolmuladi kwatha	Patola, triphala, indrayana, katuki	48 ml BD	A.H. 19/30
	Manjishthadi mahakashaya	Manjishtha, Nimba, Adusa, Triphala, Haldi, Chitrak, Giloya, Chirayta, Khadir, Kutaki, Baakuchi, Amaltasa, Murva, Danti, Anantamula, Patolpatra, Peepal.	48 ml BD	Vangsen Kushth rogaadhikara / 92
Aasava-Arishta	Lodhrasava	Lodhra, Kachur, Pushkarmool, Murva, Vidang, Triphala	2 pala	Ch. Chi. 6/44

(Fermented distilled extracts of herbs)	Go-mutrasava	Go-mutra, Chitraka root, Shunthi, Marich, honey	15 ml BD with equal water	Astanga Hridayam switra-krimi chikitsa 20/7
	Khadirarishtha	Khadira, Devadaru, Baakuchi beej, Darvi, Triphala	15 ml BD with equal water	A.F.I.
Ghrita	Somraji ghrita	Khaddar, Baku chi, Patel, Triphala, Traaymana, Dhamasa		Vangsen Kushtha rogaadhikara/ 300
	Nilee ghrita	Triphala, Lauha bhasma, Makoya, Shankhpushpi, Varun, Trikatu, Devdaru,	Use for drink and massage	Vangsen Kushtha rogaadhikara/ 304
	Tikta ghrita	Parvala, Nimb, Kutaki, Daruharidra, Traymana, Paathaa		A.H. 19/2

Lodhrasava is mentioned in prameha chikitsa (treatment for obstinate urinary disorders) but it may be used for shvitra.

to sunlight is must in this disease.³⁷ A paste of bark of kathagular, Bakuchi seeds and chitrak mixed with gomutra is applied on affected part before exposure to sunlight.

Local Application- According to Atharva vada, deficiency of Pitta doshas (bodily humors) in Kilaasa skin disease, so exposure

Table 5: Ausadha yoga (combination drugs) for external application

Kalpna	Yoga for local application	Ingredients	Reference
Lepa	Sidhma lepa	Catha, Tejapatra, Marich, Manahshila, Kasisa, Mustard oil	Ch. Chi. 7/117
	Bhallatakadi lepa	Bhallataka, Chitrak root, Snuhi root, Arka root, Shunthi, Maricha, Pippali, Shankh, Tuttha, Salts (saindha, samudra, vida, sambhar, black salt), Yavakshara, Sarjikshara, kalihari	Ch. Kushtha chi. 50/51
	Savarnakar lepa	Baakuchi, Hartal bhasma, Go-mutra	Astanga Hridaya Shvitra-Krimi chikitsa 20/13
	Ayorajadi lepa	Loha powder, black Tila, Anajana, Baakuchi, Amalaki	Vangsen Kushtha rogaadhikara / 287
	Pigento ointment	Baakuchi beej, Jeeraka, Chakramard beej, Tulsi beej, Chitrak mool, Khadir twak, Neem beej, Erand beej, Garik bhasm, Gandhak	Charak pharmacy
Gutika	Avalgujadi gutika	Baakuchi (16 tola), Hartal, Mainshila, root of Gunja and Chitrak mixed with Gomutra	Vangsen kushtha rogaadhikara/ 280
Ghrita	Mahanila ghrita	Triphala, Trikatu, Tulsi, Mehndi, Makoya, Amaltasa, Madaar, Kutaj, Chitrak, Danti, Daruhaldi	Su. Chi. 9/37
Taila	Jyotishmati taila	Nilathotha, jyotishmati	Vangsen kushtha rogaadhikara , 314
	Laxadi taila	Laxa, Sarja ras, Rasanjan mixed with Gomutra, Gopitta	Su. Chi. 10/64
	Somaraji taila	Bakuchi, Haridra, Daruharidra, Sarshap beej, Kutha, Karanja beej, Aargvadhya patra mixed with Go-mutra	Chakrdatta kushta chi, 164
	Aaragvadhdam taila	Aaragvadhya, Dhava, Kootha, Hartal, Mainshila, haridra	Ch. Kushtha chi 50/122

Dos and Don'ts

Do's: Light and wholesome food, vegetable having bitter taste, old rice, barley, green gram, vegetables bitter in taste³⁸. Consumption of vegetables of drum sticks is recommended.
Don'ts: Coitus, alcohol³⁹ Curd, sour fruits, black seed, Food items containing of milk with jaggery and fruits. Avoid non-vegetarian food items. Avoid incompatible milk foods, alcohol

CONCLUSION

The description of Kilaasa disease dates back to 3,518 year ago in Vedas. Kilaasa is a skin disease characterized by whitish patches all over body without any pain and secretions. On basis of its non-infectious and non-exudative nature, it is different from kushta. This skin disease does not harmful for body systems. Kilaasa is caused by vitiated of the tridosha (vata, pitta, kapha) and tridhatu (rakta, mamsa, meda) of the skin. In this disease, dosha are limited to the skin only. Daaruna, Aruna and Shvitra are synonym. There are three sub-types of Kilaasa basis on the colour of patch. Colour of patches always appears due to doshas (bodily humors) because maamsa and meda dhatu are unable to change of the skin colour. When doshas (bodily humors) penetrate and proceed from rakta dhatu to further dhatus, disease become difficult to cure. Shodhana and Shamana are the principal treatment of Kilaasa. After the purification, sunlight therapy, local ointments and ayurvedic formulations are used for shaman therapy. The main

ingredients used in this treatment are ushna virya and katu (bitter) vipaka properties. Katu rasa and ushna virya properties stimulate the melanocyte for melanin secretion. White patches convert into natural color of skin due to increases formation of the melanin in skin. The Ayurveda etiology, pathology and treatment of the shvitra are similar of the maha kushtha and kshudra-kushtha. The symptoms are similar to the Vitiligo described in contemporary medical science.

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