

AYURVEDIC CONCEPT OF KRIMI

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ABSTRACT

The word Krimi has very much potential in Ayurvedic literature. In the etiology of many diseases microbial relation played very important role. The term krimi has been used in broader sense i.e. it includes all pathogenic and non-pathogenic organisms covering wide range of infection and infestation. These infectious diseases caused by krimi are explained under the title of Oupasargaja rogas, which spread through contact with patients and through other routes. Here an effort has been to compile all scattered matter about krimi from various ayurvedic treaties.

Keywords: Krimi, Sankramaka, Oupasargaja, Janapadodhvansa

INTRODUCTION

Since the Vedic period the Krimi are one of the oldest companions of the human beings. Ancient acharyas were well aware regarding the presence of the microorganisms. There are some indirect references in Vedas for microbes and infectious diseases in the name of Krimi & Krimi Rogas. Krimi are thought to be the causative factors of a number of diseases. Krimi enter into body and produces a number of diseases. (Atharvaveda 2/32/6).

The Visible or invisible minute organisms that affect on living & non living things of biosphere are described very efficiently in Ayurvedic science. The Krimi is a broad term which includes all types of worms and microbes. That may be pathogenic or non-pathogenic. All acharyas described krimi, with classification, symptoms and treatment. Infectious diseases are mentioned in samhita granthas as Bhutabhishagaja, Sankramaka, and Upsargaja rogas.

Etymology of word "KRIMI"

Krimi derived from "**Krama**" Dhatu. Two meanings may

be there -

a) 'Bhrame samprasaran cha' which moves with Pada (legs- podia). (Shabdakalpadruma)

Origin of Krimi (Ashtanga Hridaya 2/31/5)

As per the text Ashtanga hridaya, krimi are present all over the biosphere. Their Utpatti Sthanas are told as parvata (mountain), vana (forest), oushadhi (plants), pashu (animals), apsu (water).

संक्लेदात् किमिश्चास्य भवन्ति उपहतात्मनः ! Ch.Su. 17/38

Charaka explained that, Kleda in the body is one of the factors for the production of Krimi.

Types of Krimi: (Atharva Veda 2/311)

- | | | |
|-------------|---|------------------------|
| 1. Drishta | - | which can be seen. |
| 2. Adrishta | - | which can not be seen. |
| 3. Durnama | - | pathogenic. |
| 4. Sunama | - | nonpathogenic. |

Historical Review of Krimi

The historical review of “Krimi” explained as follows -

According to Vedic Literature, the text Madhava nidana

In Vedas many indirect references are found which tells about Krimi, along with Vata, Pitta, Kapha “Sukshma Jantu” is also supposed to be responsible for creating diseases.

In Rigveda

According to Rigveda there is a particular Krimi that affects the “Garbhyantra” and causes to “Grabhanasha” (**Rig Veda. 8/8/20/2**). in the infections of vagina, otherwise the whole female reproductive system, sterility and premature deliveries is said to be complications of this infection.

In Yajurveda

Yajurveda describes the Krimi causing headache and abdominal pain (**Yajur Veda 13/7**). It also refers to the development of diseases by the Krimi present in utensils after eating food. (**Ibid 16/621**)

The word Krimi has mentioned by many synonyms as ‘Rudra’ which are most dangerous and cause so serious infections in human, which make them cry (**Ibid 16/54**).

In Atharvaveda

In Atharvaveda two types of Krimi are described – ‘Drishya’ & ‘Adrishya’. The ‘Kururu’, ‘Alagandu’ and ‘Shaluna’ are said to be their specific names (**Atharva Veda 24/31/1**).

In other mantras Krimi that are present in head and spinal cord are named as ‘Avaskara’ and ‘Vyadhavara’.

Atharvaveda explained that the micro-organisms can originate, from plants, water, earth and forest (**Atharva Veda 5/23/1**); they enter into human body and produces diseases.

Classification of Krimi

There are more classification of Krimi are described in Atharveda, according to Varna, Aakriti, Sthana and Karma.

Table No.1: Showing the classification according to Varna

Synonyms of Krimi	Varna	Context
Arjuna	White Colour	A.V. 2/32/2
Krishna	Black Colour	A.V. 8/6/5
Babhru	Grey Colour	A.V. 5/23/4
Rohita	Reddish Colour	A.V. 5/23/4
Lohitashya	Mouth is reddish in Colour	A.V. 8/6/12
Sarang	Mix of different Colours	A.V. 2/32/2
Munikesh	Tail like hairs (Jata)	A.V. 8/6/17

Table No.2: Showing the classification according to Aakriti

Synonyms of Krimi	Varna	Context
Vishvarupa	It can change its shape	A.V. 5/23/5
Alaganda	It looks like roller (Cylinder)	A.V. 2/31/2
Babhru Karna	Ear is grayish in Colour	A.V. 5/23/4
Chaturaksha	It is having four eyes	A.V. 8/6/19
Keshava	It is having hairs on his body	A.V. 8/6/23
Aprachakansha	It is having small thigh	A.V. 8/6/16
Urunda	It is having wide face	A.V. 8/6/16
Riksha Grivi	The neck looks like bear (animal)	A.V. 8/6/2
Kumbha Mushaka	The testis looks like Kumbha	A.V. 8/6/15
Pancha Pada	It is having five legs	A.V. 8/6/22

Table No.3: Showing the classification according to Sthana

Synonyms of Krimi	Sthana (Region)	Context
Anvatraya	Stays in Antra (Intestine)	A.V. 2/31/4
Parshteya	Lives in ribs (Parshuka)	A.V. 2/31/2
Shirshanya	Lives in Sira (Head)	A.V. 2/31/4
Basta Vasina	Lives in goats	A.V. 8/6/2

Table No.4: Showing the classification according to Karma (Pharmaceutical & antimicrobial studies of Sanjevani Vati, p-11)

The specific Krimi is having specific karma. According to karma, the organisms are divided into different types.

Synonyms of Krimi	Karma	Context
Rakshasa	Escape always from this krimi because it kills in seclusion (Lonely) and in night it moves.	Nirukta 4/18, Kaushika Sutra 10/4
Pishacha	This Krimi eats unboiled flesh	Shabda Kalpadruma
Yatudhana	Which causes pain	Shabda Kalpadruma
Krimidin	Micro-organisms which slowly invade whole body and cause infection.	Nirukta 6/11
Apsara	Which swims in water	Shabda Kalpadruma
Vishuchin	Which causes pricking like pain	Shabda Kalpadruma
Marimrisha	Which causes recurrent of infection	A.V. 8/6/17
Vatavya	The organism spreading through air	Shathpatha Brahman

Table No.5: Showing the classification according to Poshana (Nourishment) (Ibid p-12)

Synonyms of Krimi	Nutrition	Context
Avakada	Which eats the aquatic plant (Vallisneria octandra)	A.V. 4/37/10
Aandada	Which eats the eggs	A.V. 8/6/25
Kranyada	Which takes habit of flesh of animals and human being	A.V. 5/29/8
Vatsapa	Which takes the blood of Embryotic child	A.V. 8/6/1
Havirada	Which takes the Agni (Fire)	A.V. 4/37/8

Treatments of Krimi According to Veda

In Vedic literature the treatments of Krimi is divided into two parts.

1. Aadhyatmika / Aadidaivika (Spiritual/Psychological)

By praying of Surya (**Atharva Veda 1/7/1**), Agni (**Atharva Veda 5/23/6**), Indra, Maruta, Megha etc.

2. Aadhibhautika (Physical) –

i) Parthiva Dravya (**Atharva Veda 1/16**) - lead, Anjana, Trikkudaja, Shankhamani etc.

ii) Vanaspatika Dravya (**Atharva Veda 8/6**) - Sarshapa, Prishniparni, Ajshringi, Apamarga, Kustha, Guggulu etc. are used.

According to Samhita Literature

According to Samhitas the Krimi can be classified in different groups are as follows (**Charaka samhita Vimana sthana 7/9**)

According to effect on the body -

- i) Sahaja or Non Pathogenic
- ii) Vaikarika or Pathogenic.

These types of Krimi are mainly described elaborately with their pathogenicity in Ayurvedic classics.

According to site on the body

i) Bahya or External Krimi e.g. - Yuka, Liksha etc. (**A.H.Ni. 14/43-45**)

Bahya Krimi is also known as, 'Malaja Krimi'.

ii) Abhyantara or Internal - who remain inside the body (**Su.U.54/18**)

According to source of origin (Madhava nidana 7th chp. p.285)

i) Malaja	-	Those originate from Bahya Malas like sweat, dirty clothes etc.	iii) Kaphaja	-	Those originate from Shleshma Sthana i.e. Amashaya.
ii) Raktaja	-	Those originate from blood.	iv) Purishaja	-	Those originate from Pakvashaya (stool)

Table No.6: Showing the Total number of Krimi according to their Sites as mentioned in different Ayurvedic classics

Sl. No.	Name of the Text	Bahya or Malaja Krimi (External)	Abhyantara Krimi (Internal)			Total No. of Krimi
			Kaphaja	Raktaja	Purishaja	
1.	Charaka Samhita	2	7	6	5	20
2.	Sushruta Samhita	-	6	7	7	20
3.	Bhela Samhita	-	-	-	-	20
4.	Harita Samhita	7	6	-	-	13
5.	Astangahridya	2	7	6	5	20

Table No.7: Showing the site of Krimi as mentioned in Brihatrayi (Charaka samhita Vimana sthana 7/11)

Sl. No.	Text	Malaja	Raktaja	Kaphaja	Purishaja
1.	Charaka samhita	Kesha, Shmasru, Loma, Pakshma, Malin Vastra	Rakta-vahini Sira, Rakta-Vahini Dhamani	Amashaya	Pakvashaya
2.	Sushruta Samhita	-	-	Amashaya	Pakvashaya
3.	Ashtanga Hridaya	Kesh, Loma	Rakta-Vahini Sira	Amashaya	Pakvashaya

Treatments of Krimi According to Samhita

Charaka Samhita gives three methods for the treatment of Krimi (**Charaka samhita Vimana sthana 7/15**)

i) Apakarshana (Removed by Vamanadi Panchakarma procedures)

ii) Prakritivighata (Breaking the pathogenesis)

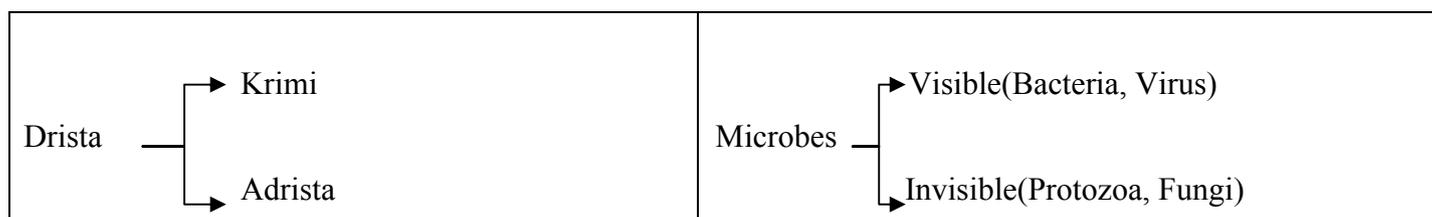
It can be done by giving Katu, Tikta, Kshaya, Kshara and Ushana Dravyas.

iii) Nidana Parivarjana (Absence from cause)

It means to avoid all those causes which are responsible for producing diseases like Mithya-ahara (eg. Kaphavardhaka Ahara, Dugdha, Dahi, Guda etc.), Mithya-vihara (eg. Divashayana).

In ancient Ayurvedic Grantha, the “Rakshoghna Gana” is described as group of plants possessing Krimighna properties. These Dravyas keep the environment free from Krimi. At ancient time Rakshoghna Dhoopana have been used for the sterilization of rooms, kitchen, Rasayanshala, Shastragara etc. Similar such references of Dhoopana Karma in the treatment of various diseases. It can be found in Charaka and Sushruta Samhita. Here the aim of Dhoopan Karma is antiseptic, anti-inflammatory and bacteriocidal effect of the Krimighna drugs in the treatment of such diseases like Vrana, Arsho Roga, Shwasa Roga and Karna Roga.

Table No.8: Resembling facts of Ayurvedic Krimi Vigyana with Modern Microbiology (Study of some Gomutra containing formulations W.S.R. to its Microbial contamination,p-75)



Puti Aahara, Klinna Aahara Ashuchi Aahara, Sandusta Aahara ↓ Krimi Roga	Contaminated & deteriorated food material ↓ Infectious diseases.
Use of Krimi – Anupahata Drug to make different Ayurvedic formulation as well as in single drug therapy, is recommended By classical text	Use of uncontaminated material (raw drug) is the first cardinal rule for the pharmacy that is recommended By W.H.O.
Dhoopana Karma ↓ To kill Krimi	Fumigation is successful measure ↓ For Sterlization

Sankramaka Rogas (Infectious Diseases):-

Acharya Sushruta has enumerated the reasons for transfer of infection

**प्रसङ्गात् गात्रसंस्पर्शात् निःश्वासात् सहभोजनात् !
सहशय्यासनाच्चापि वस्त्रमाल्यानुलेपनात् !!
कुण्ठन्वरश्च शोषश्च नेत्राभिष्यन्द एव च !
औपसर्गिक रोगांश्च सङ्क्रामन्ति नराञ्जरम् !!**

. Su.Ni 5/32-33

The intercourse between an unhealthy person and healthy partner results in spread of diseases (e.g. syphilis, gonorrhoea, etc.). Contact with a person can lead to disease (e.g. small pox). Air borne infection like T.B. etc. the diseases also spread by taking food with a diseased person, sleeping alongside a person who has got contagious disease, by using his clothes and other materials, which are not disinfected. 'Kushtha' (Leprosy, skin diseases), Fevers, Cachexia or Emication (Shosha), Conjunctivitis, AIDS, Hepatitis is some of the diseases, which spread by the above said mode.

Similarly, diseases like dysentery spread through contaminated water. Cholera spreads through contaminated water or food. Hepatitis-B spreads through blood transfusion, drug abuses, placental transfer, etc. Some of the organisms gain entry through nose and result in cough, dyspnoea and sinusitis. Diseases like pneumonia, pulmonary Koch's, bronchitis, and emphysema arise as a result of infection through nose.

Sankramaka Roga Pratishedha (Prevention of Infectious disease)

In Rigveda, Agni (Rig Veda 1/28/1) and Surya (Atharva Veda 5/23/6) are said to have Rakshoghna properties. In

Atharvaveda, the sunrays are said to be potent source of disinfection that help to disinfect visible and invisible organisms (Ibid. 5/31/1).

In ancient Ayurvedic texts, the Rakshoghna Gana is described as group of plants possessing Krimighna properties. These Dravyas keep the environment free from krimi. At ancient time, 'Rakshoghna Dhoopan' has been used for the sterilization of rooms, kitchen, Rasayanashala, Shastragara (Sushruta samhita Sutrasthana 5/17) etc.

Janpadodhvansa Rogas (Epidemic diseases) (Charaka samhita Vimana sthana 3/12)

The diseases that spread in the form of epidemics are called 'Janapadodhvansa Rogas' (Epidemic diseases). Acharya Charaka gave the concept of Janpadodhvansa in Vimana Sthana Chapter 3 in which Vayu, Desha, Kala and Jala all are affected and in modern era also we see that epidemics of various infective diseases occur when these four factors get vitiated.

Janpadodhvansa Pratishedha (Prevention of Epidemics)

Charaka Samhita mentioned to keep a collection of medicinal herbs before the epidemics and to follow the daily and seasonal regimen given in Charaka samhita to prevent

oneself from getting infected. For treatment, Sushruta has asked to perform Puja, Homa, Dana, Meditation, Discipline, Tapa and Faith in elders, Teachers and God, to vacate the place where the epidemic is present (**Sushruta samhita Sutrasthana 6/22**)

Importance of Tridosha & Germ Theory

In 'Ayurvediya Anusandhana Paddhati Acharya P.V. Sharma says, "In Ayurveda, causative factors of diseases are analyzed quite efficiently.

In the genesis of disease, Tridosha are **Samavayi karana**, Dosha-dushya samyoga is **Asamavayi karana** and improper diet and practices, and germs etc. are **Nimittakarana**.

The disturbance in the Tridosha equilibrium leads to disease formation just like transformation of soil into a pot. But the especially Tridosha in the form of Samavayi karana is that Karya (disease) persists as it is whenever Nimittakarana exists. Therefore, in Ayurvedic line of treatment, there is not only important to maintain the homeostasis of doshas but

REFERENCE

- Atharva Veda 1/7/1
Atharva Veda 1/16
Ashtanga Hridaya 2/31/5
Atharva Veda 5/23/6
Ayurvediya Anusandhana Paddhati Chap. 2, P-30
Atharva Veda 2/31/1
Atharva Veda 8/6
Atharva Veda 24/31/1
Atharva Veda 8/6/4
Charaka samhita Vimana sthana 3/12
Charaka samhita Vimana sthana 7/9
Charaka samhita Vimana sthana 7/11
Charaka samhita Vimana sthana 7/15

Charaka Samhita Sutrasthana. 17/38

also to destroy the germs and maintain proper diet and practices. By giving more emphasis on Tridosha equilibrium, so one should not ignore the Nimittakarana. (**Ayurvediya Anusandhana Paddhati Chap. 2,p-30**)

CONCLUSION

Description of Krimi and Krimi Roga available in Vedic period, purana, Ayurveda and other literature but according to time era depth of literature varies. Many Ayurveda granthas and samhitas have lost in time era, which had more detail description regarding Krimiroga. Under the word Krimi one can include all microorganism helminthes protozoa, parasite, and virus bacteria. It is very difficult to correlate Ayurvedic terms regarding the Krimi with modern term due to lack of detail description and understanding of individual Krimi. To overcome from etiological factors, one can maintain personal hygiene, sanitation, housing condition, disincentive environment.

- Ibid. 5/31/1
Ibid 16/621
Ibid 16/54
Ibid Pg. No. 12

Pharmaceutical & antimicrobial studies of Sanjevani Vati,Pg.No 11

- Rig Veda 1/28/1
Rig Veda. 8/8/20/2

Study of some Gomutra containing formulations W.S.R. to its Microbial contamination, Pg. No. 75

- Sushruta samhita Sutrasthana 5/17
Sushruta samhita Nidana sthana 5/32-33
Sushruta samhita Sutrasthana 6/22
Yajur Veda 13/7

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