

A REVIEW ON KRIMI & ITS MANAGEMENTVD. Pawan Rane*¹, VD. Purni D. Barhate² and VD. Sneha Tiwari²¹Associate Professor Bal Roga shri Ayurved College Nagpur.²Associate Professor Bal Roga Bhavusaheb Mulak Ayurved College Nagpur.***Corresponding Author: VD. Pawan Rane**

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INTRODUCTION

In Ayurveda the word 'Krimi' is used as broad sense for all worms and microorganisms perspective of modern science. Concept of krimi is not new its description is found since Vedic period. The visible or invisible i.e. macro or micro organisms that affect the living & non living things of biosphere are described in Ayurvedic literature. In modern medical science there is separate branch for worms and microbes i.e. helminthology and microbiology respectively but in Ayurveda the word Krimi is used for all worms and microbes. In Ayurveda all acharyas mentioned the term Krimi and most of the authors described the classification, causes, symptoms and treatment of the Krimi. Ayurvedic physicians were well aware about Krimis and Krimirogas, they have described 20 types of krimis and their habitat of the different part of the body having various shape and size, the location of Shleshmaja and Purisaja Krimis are gastrointestinal tract. They produced local as well as general symptoms in human being.

Ancient Acharyas were well aware regarding the presence of microorganisms. In Shabdakalpadruma Krimiis derived as "Bhramesamprasarane cha" means which moves with Pada or legs (podia) According to VedaKrimioriginates in different areas like Parvata, Vana, Oushadhi, Pashu Apshu etc Krimi derived from dhatu "kunja himsayam" which literary means either to produce fatal effects or to destroy. Charaka informed Kleda in the body is one of the factors for Krimi production. In Samhita Period there is ample description regarding Nidana Bheda Lakshana and Chikitsa Of Krimi In present day science, microbiology and helminthology are the separate branches including all the worms and microbes.

Acharyas described Krimi very beautifully which lives in our body in different site means the organism invading in our body and locate in some particular site and produced various diseases. Modern science is said that there are some beneficial microorganisms and some are harmful, this is previously mentioned in Samhita period but there is no broad description of beneficial Krimi. For this they are using the word Sahaja Krimi which means avaiakarika (non-pathogenic). Ayurvedic medicinal system is oldest in origin with treasures of knowledge about practices. It works with the purpose of perfect health of human being i.e. physically or mentally free from diseases and has no pain. Acharya Charaka has described three folded treatment² of Krimiroga viz. Apakarshana, Prakritivighata and Nidanparivarjana. Apakarshana means to eliminate the dosha, mala and krimi sanghata forcefully. It contains most forcible

shamshodhana viz. Vamana, Virechana, Shirovirechana and Asthapana basti. Prakriti vighata means destruction of susceptible environment of krimi. Nidan Parivarjana means to avoid the causative factor. Samshodhana is considered as a basic treatment of Krimiroga while Prakriti vighata and Nidan parivarjana

CLASSIFICATION OF KRIMI

In Atharva Veda Krimi is divided into Drishta and Adrishta type meaning visible and invisible. Also there is mention of Durnama and Sunama Krimi which may be accepted as pathogenic and non pathogenic. The following table shows the total number and divisions of Krimi according to different Acharyas.

MATERIALS AND METHODS

The details of the concerned information were retrieved from various sources such as literatures of both classical as well as modern, web based database searches and published papers.

CONCEPT OF KRIMI

There are a vast number of worms that can live within the human body. The worms reside in the digestive tract, especially in the intestines, from where they obtain their nutrition. Hence, they are parasites living within the hosts, body of humans. Since worms dwell inside the human host biologically termed as endoparasites. The word 'Krimi' mentioned in Vedic literature has broad based meaning. There are four Vedas viz. Rigveda, Samaveda, Yajurveda & Atharvaveda. Description of

Krimi & Krimiroga available in three Vedas except Samaveda. More details about Krimis are available in Atharvaveda. In Atharvaveda the existence of krimi is mentioned in trees, water, mountains and in living being which cause various diseases³, in other words we can say that presence of bacteria in environment has been mentioned very clearly. Some other types of krimis which cause disease in eyes, nose, and teeth are also mentioned

ACCORDING TO MODERN

Flatworms, Pinworms, Roundworms (*Ascaris lumbricoides*) and Whipworms spread through consumption of raw and undercooked meats, from person to person directly, consumption of contaminated solid and liquid foods and consumption of contaminated solid and liquid foods respectively

Prevention of Krimi Roga (Intestinal worms)

Following clean hygiene and sanitation habits is the best method of preventing intestinal worm's infestation. In this regards, general guidelines have been postulated; One should always ensure properly filtered and boiled drinking water for their family. The food must be properly cooked, especially if it is red meat like beef and pork. Vegetables must be washed thoroughly before putting in the cooking pot. Fruits must be washed thoroughly, and ideally peeled, before consumption. After outdoor activities like gardening, wash your hands and legs thoroughly with a disinfectant soap. Hands must be washed after each visit to the toilet. All laundry must be washed on a daily basis. Underwear must be washed and dried separately from other clothes. As an extreme measure, each person's clothes must be washed separately. Footwear must be worm whenever stepping out of the house. If one person in the house is affected, then treatment must be given to all members living in the house. This is to prevent further transmission

Children diet in Krimi Roga (Intestinal worms)

One must ensure that whatever food is consumed, it must be washed and cooked thoroughly. The same applies for drinks.

Some foods to avoid during worm infections are:-

- 1) Red meats including mutton, beef and pork
- 2) Milk and milk products (especially milk that is not pasteurized properly)
- 3) Ghee
- 4) Water that is not boiled
- 5) Vegetables that are not washed and cooked well

TREATMENT OF KRIMI

Acharya Charaka described three basic methods for the treatment of Koshtagata Krimi² such as-

- 1) Apakarshana (Removed by Vamanadi Panchakarma procedures)
- 2) Prakritivighata (Breaking the pathogenesis)
- 3) Nidana Parivarjana (Absence from cause)

(1) APAKARSANA

The word Apakarshana means to scratch the dosha, mala and krimisanghata forcefully. Any process by which the unwanted components are removed or eliminated from the body is consider as Apakarsana. Apakarsana of Krimis includes the manual and instrumental removal of them where it is applicable. Apakarsana or removal of the Bahya Krimi (external) should be done by manual method. Apakarsana of Abhayantara Krimi, which reside in their usual habitat should be done by the elimination method such as:

(i) Vamana Vitiated doshas eliminated through the upper part of Srotas is called Vamana. Amashaya is the site for production of Kapha and when it is vitiated, it produces Kaphaja Vikara as well as Kaphaja Krimi, these are eliminate out through Vamana therapy in Ayurveda.

(ii) Virechana This karma is done for eliminating the vitiated doshas through gastrointestinal tract. Drugs used in this karma should be krimighna as well as having purgative effect which can be help to killing the parasite in the intestine or to anaesthetise the worms and to remove out by peristaltic movements of intestine. This karma is most relevant in intestinal worm infestation in which worm will die or get lost its consciousness and eliminate out from the gut.

(iii) Shirovirechana Samshodhan Karma in which the doshas seated in head (in the sinus) are eliminated through the nose is called shirovirechana. In this administered drugs should be having katu tikta rasa and ushna guna which effecting over the nasal mucosa, to stimulate the nerve ending and secreting the vitiated matter. These vitiated doshas and krimis are thrown out by this procedure.

(iv) Asthapana Basti This is also a technique of eliminating the Krimi from large intestine. In this process, the active principles of the medicine will directly reach at the site of Krimi and effect the organism. The Basti is divided into three types

- (1) Anuvasana Basti
- (2) Asthapana Basti
- (3) Uttara Basti.

Acharya has given importance to Asthapana Basti in Krimi than Anuvasana Basti because the oleative preparation favour the Krimi whereas contents of Asthapana Basti i.e Kashaya Dravya which has the Karshan Guna and they inhibit the growth of Krimi and its activities.

(2) PRAKRITI VIGHATA

Prakriti which is able to produce Utpadaka Karana and Vighata means to be destroyed i.e, Vinasha. Therefore overall Prakriti Vighata means to destroyed the producing environment. After doing Samshodhan Chikitsa (with the help of Apakarshan) the doshas, Mala Sanghata and Krimis are no doubt eliminated out of the body but if their Prakriti is not altered, the anubandha of disease will occurs. Prakriti Vitghata are inhibiting factors which responsible for the inhibition of growth and production of Krimis by dravyas having Katu, Tikta,

Kasaya and Ushana Guna. Kapha and Purish is the main prakriti of Krimis so Acharya Charaka advices to make use of Dravyas which possess the opposite properties to the Kapha and Purish for Prakriti Vighata.

(3) NIDANA PARIVARJANA

Nidana Parivarja means to eliminate the causative factor which promote the germinating and growing of the Krimi. This is most important principle of Ayurveda because it emphasizes on importance of Ahara, Vihara and life style as same as treatment. In this all causes should be avoided which is responsible for causing krimiroga like kaphavardhaka aahara madhura, snigdha, guda, dahi, dugdha and mithya vihara like divashayana which mentioned in classics.

Ayurvedic preparations for Krimi in Children

Asava/Arishta : Khadiradi Arishta, Vidanga Arishta, Deva Darya Arishta, Vidangaasav, Kutjarista.

Bhasma/Kashaya : Loha Bhasma, Vanga Bhasma

Choorana : Vidanagadi Choorana

Ghrita : Bimbi Ghritam, Vidanagadi Ghritam

Rasa : Krimikaalanala Rasa, Krimi Mudgarasa, Krimikuthara Rasa

Taila : Bhallatak Taila

Pathyapathya in Krimi infested children

Pathya

Rasa: Tikta & Kashaaya.

Dugdha: Cow Ghrita & Goat Dugdha.

Drava: Tila Taila, Kaanjika, Tushodaka, Gomootra, Suraa & Sauveeraka.

Phala: Apakva Kadalee, Pakva Taalaphala & Nimbuka Rasa.

Kritaanna: Madhu, Taambula, Aasthaapana Basti, Dhoopa, Abhyana & Kaphaghna

Apathya

Rasa: Amla & Madhura

Guna: Drava

Maamsa: Pork

Dugdha: Mahisha Dugdha

Phala: Badara

DISCUSSION

It is well known that the word krimi has broad meaning in Ayurveda for worms and microorganisms. Since the Vedic period its existence was found but in Samhita period detail study about the type of krimi, its morphology, pathogenesis, clinical features and management was found very clearly. There are two types of krimi – drishya and adrishya.

Adrishya krimi was recognized with the help of Anumana pramana by the analysis of sign and symptoms. Now a days, it become easy to identified with the help of microscope. Krimis which can be visualized may be compared with adult worm and which never visualized through naked eye may be considered as microbes and larval stage of worm. Different texts of

Ayurveda described the various types of krimi viz. Raktaja Krimi, Kaphaja Krimi and Purishaja Krimi. In case of Raktaja Krimi they mentioned the word Adrashantora which denote the invisible worm or adrishya krimi but these term did not used for Kaphaja Krimi and Purishaja Krimi. Although now a days some microbes are resides in intestine, stomach, respiratory system which cannot be visualized through naked eye, are considered as Purishaja Krimi and Kaphaja Krimi.

CONCLUSION

Concept of Krimi and Krimi Roga are available since Vedic period, but detailed descriptions are found in samhita period along with three fold treatment of krimiroga. According to time era depth of literature varies which had more detail description regarding Krimiroga. Krimi word shows the all microorganism helminthes, protozoa, bacteria and virus in the Ayurvedic literature. So it is very difficult to understand the correlation between the term krimi and modern science because of lack of detail description of individual krimi. Although management of krimi roga described by text of Ayurveda are step by step in proper way but it is not well established practically because it is difficult to follow the all steps of management especially in children.

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