

Krimi in the Landscape of Health, and Especially Disease

Introduction

World Health Organization (WHO) estimates that about 21% of India's population may be infected with intestinal parasites such as soil-transmitted helminths. In an Indian study, 2,57,588 stool samples were received over seven years for examination. In the 6–10 age group, intestinal parasites showed the highest prevalence, with *Giardia intestinalis* being most common across various ages, except in those above 60, where hookworm prevailed. *Giardia intestinalis* exhibited a significant decline with age, while hookworm and *Strongyloides stercoralis* displayed an increasing trend. Linear temporal trends were noteworthy for parasites like *G. intestinalis*, *Entamoeba histolytica*, and *Ascaris lumbricoides*, indicating changing prevalence over time. Therefore, the focus of this issue is Krimi Roga.

” About 30 crore Indians have worm infestations, which is 21% of population.

Concept of Krimi in Ayurveda

Krimi is of two types according to Charaka–Sahaja and Vaikarika. We discussed Sahaja Krimi (healthy microbiome) in detail in one of the previous issues of Niramaya. Vaikarika Krimi, antithesis of Sahaja Krimi, comprises Bahya Krimi (external) and Abhyantara

Krimi (internal). Bahya Krimi resides on the skin, while Abhyantara Krimi inhabits inside the body; these are the focus of the current issue of Niramaya.

Sushruta, on the other hand, presents a different classification of Krimi. While Sushruta does not talk about Bahya Krimi, he classifies Abhyanthara Krimi as of two types – Drishya and Adrishya Krimi. According to Sushruta, Shleshmaja and Purishaja Krimi are Drishya, and Rakthaja Krimi are Adrishya. According to Charaka and Vagbhata, Krimi are classified as – 1) Rakthaja, 2) Kaphaja, 3) Purishaja, and 4) Malaja.

Pathya Apathya in Krimi

One significant thing about Krimi is an aspect of Pathya and Apathya in Krimi, which is as follows:

Pathya	Apathya
Shodhanakarma like Snehana, Swedana, Asthapana Basti, Shirovirechana, Virechana, Dhupapana; Consumption of Nimba, Arka (White), Bitter Guard, Raktha Shali, Thaila, Sarshapa, Kulaththa, Yava, Mudga, Gomuthra, Madhu, Sura, Shuktha, Sauvira, Tushodaka, Patola, Rasona, Chithraka, Kantakari, Vidanga, Harithaki, Bhallathaka, Hingu, Ajamoda, Khadira, Devadaru, Shunthi; avoidance of worry.	Vamana Vegavidharana, Diwaswapna, Ajeerna, Excess consumption of Mamsa, Dugdha, Pathrashaka, Viruddha Bhojan, Dadhi, Guda, Pishtamaya Padartha, Masha, Amla Rasa and Madhura Rasayuktha Padartha.

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Chikithsa of Krimi

There are three main aspects of treating Krimi Roga – Apakarshana, Prakruthivighatana, and Nidanaparivarjana. Apakarshana involves removing Dosha, Mala and Krimisanghata forcefully. Shodhana Karma – Vamana, Virechana, Shirovirechana, and Asthapana basti are involved in Apakarshana. Prakruthivighata is the destruction of the producing/favorable environment.

Katu, Thiktha, and Kashaya Dravya are involved in the process, along with those, Kshara, and Ushna-natured drugs are helpful. The drugs that act against Purisha and Kapha are used for the purpose; overall, anything against the Krimi. Nidanaparivarjana is the most critical treatment concept, eliminating the causative factors that help produce, germinate, and grow Krimi is involved. Acting on Aahara and Vihara is helpful, which includes hygiene and body immunity.

Interesting fact

Vedas detail diverse Krimighna drugs. Atharvaveda categorizes them into Krimi Jambhana (activity retardation), Kriminashana (growth inhibition), and krimighna (killing). Worshiping Agni and Surya is believed to eliminate Krimi. These remedies often fall under Devavyapasraya Chikithsa, emphasizing divine intervention for healing.

Krimighna formulations

There are several Krimighna formulations, which are listed in the table below.

Table 1. Krimighna formulations

Formulation	Main formulations	Additional formulations
Asava/Arishta	Khadirarishta, Vidanga arishta, Vidangasava	Ayaskrithi, Usirasava, Kumaryasava, Lodhrasava
Bhasma	Loha Bhasma, Vanga Bhasma	Kalyanaka Kshara, Swarna makshika Bhashma
Choorna	Vidangadi churna	Vidanga Lauha, Palasha beejadi Choorna
Ghritha	Bimbighrita, Vidanagadighrita	Amritha Ghritha, Panchathiktha Ghritha
Rasa	Krimi kuthara Rasa	Rasakarpura, Rasapushpa
Leha	Chitraka harithaki	—
Guggulu	Yogaraja Guggulu, Sapthavimshathika Guggulu	—

Evidence on Krimi treatment

The evidence available is scattered, considering the treatment used, the Krimi disease targeted, and the methodology followed.

Krimimudgara Rasa, Kriminol, and Vidangasava: A study used scanning electron microscopic to examine the effects of Krimimudgara Rasa, Kriminol, and Vidangasava on tapeworm. The study found that a maximum degree of alterations on the parasite body surface was observed in the worms exposed to Krimimudgara Rasa. This indicates that the drug is highly efficacious against intestinal worms and brings out a trans tegumental mode of action on the parasite.

Different Arishta and Asavas: In a study, Vidangarishta was shown to be more effective in causing paralysis and death of worms in a shorter period, followed by Kanakasava, Pippalyasava, and Chandanasava.

In the study, anthelmintic assay was performed on the adult Indian earthworm *Pheretima posthuma* as it is anatomically and physiologically similar to intestinal roundworm parasites of human beings. The four formulations used showed dose-dependent paralysis and death of worms; however, Vidangarishta was shown to be more effective in causing paralysis and death of worms in a shorter period of time, followed by Kanakasava, Pippalyasava and Chandanasava.

Various herbs: A review examined the efficacy of various

individual herbs in parasitic infestations. The results are elicited in Table 2.

Various formulations: A study evaluated the anti-helminthic action of Krimikuthara Rasa, Sanjivani Vati, Bhallathkasava, Kumariasava, and Vidangarishta. In the study, Krimikuthara rasa showed the best activity among five formulations, followed by Sanjivani Vati and Kumari Asava, compared to the standard drug Albendazole. In

contrast, Vidangasava showed comparable activity with Albendazole. Bhallatkasava showed the least activity. Results showed that the combination of 'Krimikuthara Rasa and Sanjivani Vati' showed better activity than the combination of 'Krimikuthara Rasa and Kumari Asava' followed by a combination of 'Sanjivani Vati and Kumari Asava. Therefore, the ingredients of Krimikuthara Rasa produce synergistic action with the ingredients of Sanjivani Vati and Kumari Asava.

Table 2. Clinical effects of various herbs		
Herb	Part used	Effect
<i>Carica papaya</i> (Papaya)	Leaves and seeds	Strong anti-helminthic activity at dose of 8 g/kg. Significant effect on egg, infective larvae and adult worm of <i>T. colubriformis</i> . Seed extracts have anti amoebic activity against <i>E. histolytica</i> .
<i>Butea monosperma</i> (Palasha)	Seed	Anthelmintic activity of different <i>Butea</i> has been reported against <i>Ascaridia galli</i> , <i>Ascaris lumbricoides</i> , <i>Toxocara canis</i> , <i>Oxyurids</i> , <i>Dipylidium caninum</i> and <i>Taenia</i>
<i>Terminalia arjuna</i> (Arjuna)	Bark	Anthelmintic activity against eggs, larvae and adult of <i>H. contortus</i>
<i>Allium sativum</i> (Lashuna)	Bulb	Efficiently inhibited the growth of protozoan parasites such as <i>Giardia lamblia</i> , <i>Leishmania major</i> , <i>Leptomonas colosoma</i> , and <i>Crithidia fasciculata</i> . Strong anti-helminthic action is observed.
<i>Zinziber officinale</i> (Ardraka)	Rhizome	Acts against human <i>Ascaris lumbricoides</i>
<i>Nigella sativa</i> (Krishna Jeeraka)	Seeds	Effective against tapeworms, hookworms and nodular worm.
<i>Ocimum sanctum</i> (Thulasi)	Leaves and seed	Potent anthelmintic activity against <i>C. elegans</i>
<i>Azadirachta indica</i> (Nimba)	Leaves and flowers	Effective against <i>Fasciola gigantica</i> , anthelmintic activity against <i>Setaria cervi</i> , larvicidal activity against <i>C. felis</i> and <i>Xenopsylla brasiliensis</i> ,

Conclusion

- * Krimi is a common complaint in India.
- * Generally, it is treated with Albendazole.
- * The literature review suggests that Ayurvedic formulations are as effective as Albendazole, if not more.
- * Overall, Krimikuthara Rasa, and Vidangarishta are effective in treatment.
- * A combination of Krimikuthara Rasa and Kumari Asava is also beneficial.

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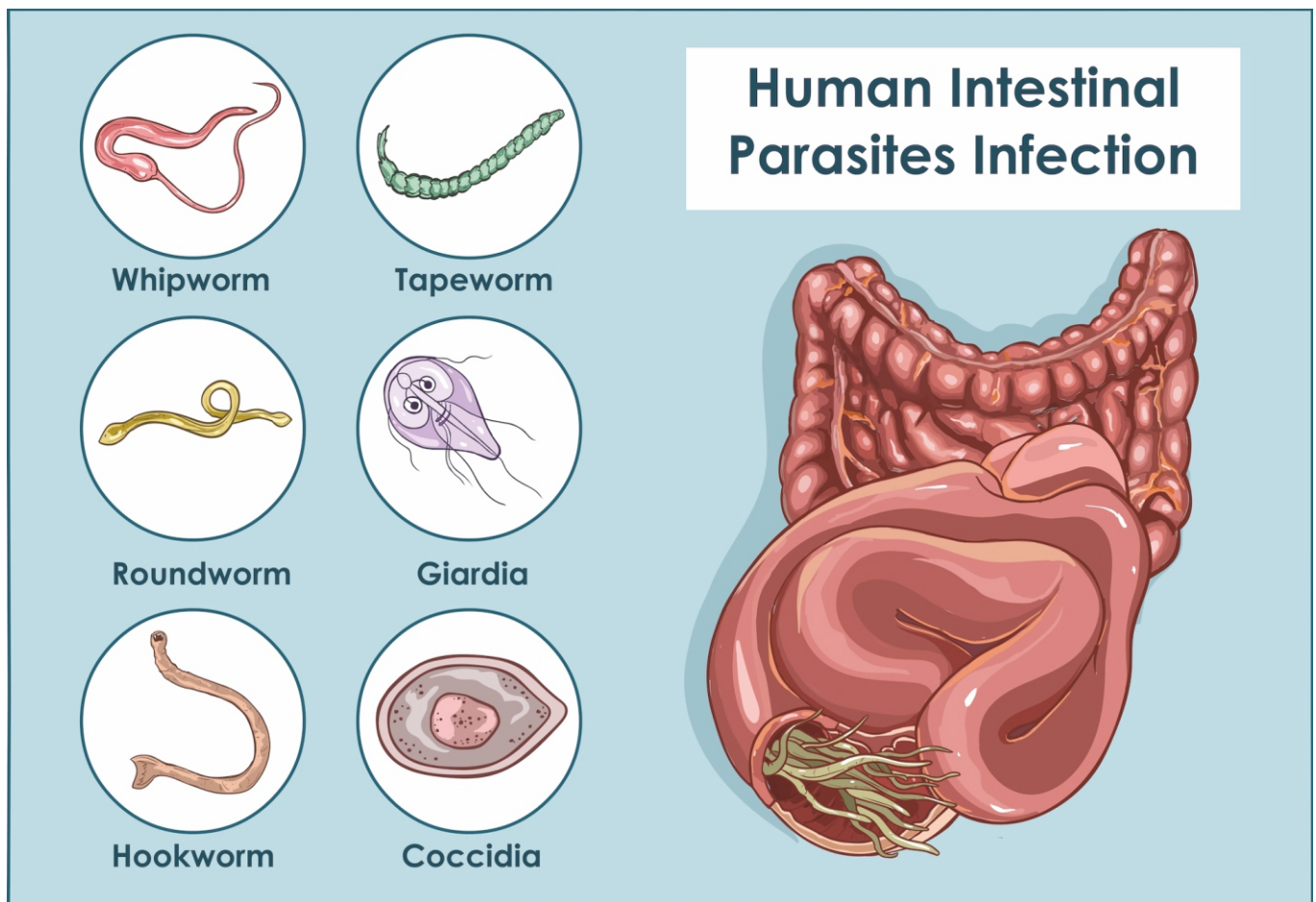
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Krimi and Their Fancy Names

Here are some fancy names of Krimis given by Sushruta.

Kaphaja Krimi	Purishaja krimi	Rakthaja Krimi
Mahapushpa	Ajava	Keshada
Praloon	Vijava	Romada
Chipita	Kipyra	Nakhada
Pipillika	Chipya	Dantada
Daruna	Gandupada	Kikkisha
Darbhapushpa	Churu	Kushtaja
	Dwimukhaha	Parisarpaja



Reference: Chougule PY, Jadhav SP. Krumiroga: Literary review. *International Journal of Research - Granthaalayah*. 2017;5(10):168–174.



Vidangarista

Dosage: 15 to 20 ml twice a day

Packaging: 200ml, 400ml

Eradicates parasitic intestinal worms.
Prevents recurrence of parasitic and bacterial infestation.
Ayurvedic vermifuge & Digestive.

INGREDIENTS: Each 10ml contains:
Vidanga(*Embellia ribes*) (Fr), Rasna(*Pluchea lanceolata*)(Rzm), Kutaja Twak (*Holarrhena antidysenterica*) (Brk), Kutaja Phala, (*Holarrhena antidysenterica*)(Sd), Patha(*Cissampelos pareira*)(Rzm), Elaivaluka (*Piper cubeba*) (sd) Each 240mg, Ksudra 7.5ml, Dhathaki (*Woodfordia fruticosa*) (fl) 960mg, Twak (*Cinnamimum zeylanicum*) (St.Bk.), Ela(*Eletheria cardamomum*)(sd), Pathre(*Myristica frugrans*)(fl) each 500mg, Priyangu, (*Callicarpa macrophylla*)(Sd), Kanchenara, (*Bauhinia variegata*) (Brk), Lodra(*Symplocos racemosa*) (Brk) Each 250 mg, Shunti (*Zingiber officinale*)(Rzm), Mareecha(*Piper longum*)(Ft), Pippali (*Piper longum*)(Ft) each 2gm



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