

STUDY OF *ADRASYA KRIMI* (INVISIBLE PATHOGEN) –*SHONITAJA KRIMI* IN
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ABSTRACT

In present era, due to busy lifestyle, lack of hygiene maintenance, bad sanitation, uncooked, packaged food, improper washing of the food materials are the major causes of developing microbes and it finally cause infectious diseases in the host is the global health problem. Ancient science already believed in *Drasya Krimi* (visible pathogen) and *Adrasya Krimi* (Invisible pathogen). *Acharya's* explained the presence of *Adrasya Krimi* (Invisible pathogen) as cause of few diseases and named it *Shonitaja Krimi*. Allopathy started believing it after the discovery of Microscope in 1683; gradually this instrument was used to find existence of invisible pathogen in the blood samples which was firstly found by French scientist Pasteur. In 1840, a Berlin scientist named Hanel related those microbes to some contagious diseases. So, here the study focused on *Adrasya Krimi* (Invisible pathogen) – *Shonitaja Krimi* in view of modern science.

KEYWORDS: *Adrasya Krimi*, *Shonitaja Krimi*, Invisible pathogen, Bloodstream infections.**INTRODUCTION**

Krimi in *Ayurveda* in broad sense is all pathogens (viz Bacteria, Viruses, Fungi, Parasites etc). Even in *vedic* period the knowledge of *Krimi* is well known & understood. The *Krimi* may be external or internal in nature. The word '*Krimi*' by etymology means as the 'one which causes sufferings and ill health'.^[1] The mode of transmission, signs & symptoms are almost same as pathogens in contemporary science. These visible or invisible organisms (*Krimi*) that affect on living & non-living things of biosphere are described very efficiently in *Ayurveda*. In present era infectious diseases (due to pathogens) constitute a considerable proportion of the a) global burden of morbidity and mortality. b)

***Krimi* Nidana & Prakara (*Krimi* causes & classification)**

The word *Krimi* is derived from the root word '*Kramana*'^[2] which means attacking, overcoming, surpassing. In *Ayurveda*, *Krimi* itself is considered as disease, which enter the body of immunocompromised individuals who indulges in taking unwholesome food, incompatible food, those who avoid physical exercise and those who sleep during day time & lack of cleanliness which in turn make body physiologically

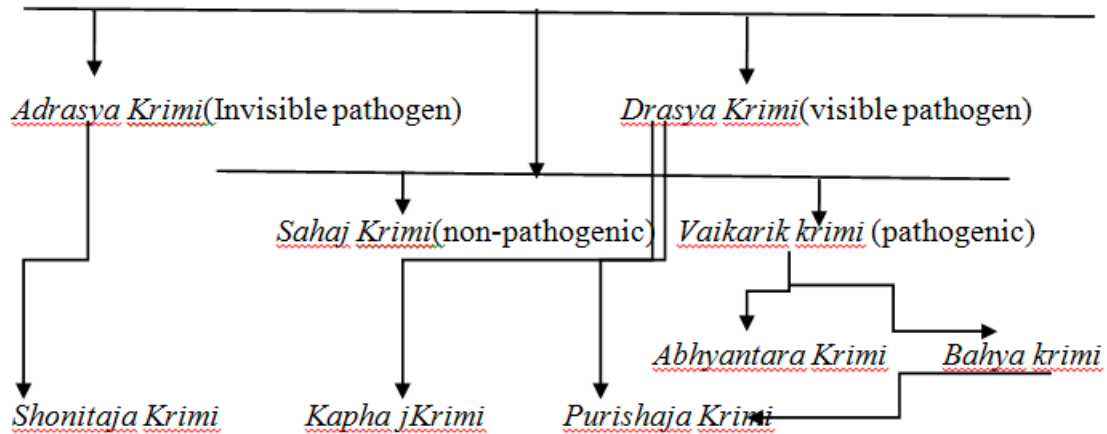
weak & reduces resistance of individuals thus create an environment for the attack of *Krimi*(pathogen).

Classification of *Krimi*^[3]

Several types of *Krimi* under various headings are described in *Ayurvedic* literature & *Veda*.

In brief, these *Krimi* can be categorized as follows;

1. According to site of the body
 - a) *Bahya Krimi* e.g. *Likha & Yuka*.
 - b) *Abhyantara Krimi* e.g. *Antrada, Udumbara* etc.
2. According to effect on the body
 - a) *Sahaja Krimi* (non-pathogenic)
 - b) *Vaikarika Krimi* (pathogenic)
3. According to source of origin
 - a) ***Malaj Krimi***: originated from *Bahya Mala* like sweat.
 - b) ***Shonitaja Krimi***: originated or residing in blood vessels (*Dhamani*).
 - c) ***Kaphaja Krimi***: originated from *Amashaya* (stomach).
 - d) ***Purishaja Krimi***: originated from *Pakwashaya* (large intestine).



In present scenario *Adrasya Krimi* (Invisible pathogen) that is *Shonitaja Krimi* (internal pathogens growing in blood) causes hazardous health effects. It includes bacteria, viruses & some parasites.

1. In *Charak Samhita*, *Charaka Acharya* explained *Shonitaja Krimi* as_

शोणितजानांतुखलुकुष्ठैःसमानंसमुत्थानं; स्थानं-
 रक्तवाहिन्योधमन्यः; संस्थानम् अणवोवृत्ताश्चापादाश्च,
 सूक्ष्मत्वाच्चैकेभवन्त्यदृश्याः; वर्णः- ताम्रः; नामानि- केशादा,
 लोमादा, लोमद्वीपाः, सौरसा, औडुम्बरा, जन्तुमातरश्चेति;
 प्रभावः- केशश्मश्रुनखलोमपक्ष्मापध्वंसः; व्रणगतानां च
 हर्षकण्डूतोदसंसर्पणानि, अतिवृद्धानां च
 त्वक्सिरास्नायुमांसतरुणास्थिभक्षणमिति;
 चिकित्सितमप्येषांकुष्ठैःसमानं, तदुत्तरकालमुपदेक्ष्यामः
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Etiological factors for *Shonitaja krimi* are similar to those of *Kushtha*.

Habitat :- Blood vessels (*Dhamani*).

Morphology:- minute, round and having no feet and invisible.

Color:- coppery.

Types

- a) **Keshada** –The *krimis* of this group cause falling of hair follicles.
- b) **Lomada** –This group of *Krimi* causes destruction of hair follicles.
- c) **Saurasa** – The *Krimi* of this group produce reddish yellow scars over the skin whenever they affect.
- d) **Audumbara** – This group of *krimi* causes nodules like *Aundumbara* fruit over the body.
- e) **Jantumatraha**- The word indicate towards the *krimis* which gets spread with the wind.

They may produce pathogenesis like falling of hair, beard and moustache, nails, body hair, eyelashes when they infect a wound they cause oversensitivity, itching, piercing pain and creeping sensation, when they are excessively grown they eat away skin, blood vessels, ligaments, muscles and cartilage.

Their treatment is also similar to that of *Kushtha* (variety of skin disorders).^[4]

2. Also in *Sushrut Samhita*, *Sushrutacharya* describes as *Shonitaja Krimi* are either black or blood colored, glossy, thick and generally produce diseases which are peculiar to the vitiated state of the blood in the body.^[5]

Sushruta has described different nomenclature than *Charakacharya* expect *Keshada* & *Lomada*.^[6]

- a) **Keshada** -The *krimis* of this group cause falling of hair follicles.
- b) **Romada**-This group of *Krimi* causes destruction of hair follicles.
- c) **Nakhada** – This group of *Krimi* affect nails.
- d) **Dantada** -This group of *Krimi* affect teeth.
- e) **Kikkisha**- This group of *Krimi* produces whitish spots over the body very much similar in the appearance to coconut as the meaning *ki-ki* denotes coconut.
- f) **Kushthaja**- the group of *Krimi* produces various types of *Kushtha* (skin diseases)
- g) **Parisarpaja**- The group of *Krimi* are able to produce diseases that spread all over the body.

And also *Sushrutacharya* describes that those beginning with *Keshada* are *Adrasya* (invisible) and (of these later) the first two (viz *Keshada* & *Romada*) are *Asadhya* (incurable).^[7]

3. Here some examples of microbes (invisible to the unaided eye) in blood stream & infect the host called Blood stream infection & these produces similar features as *Shonitaja Krimi* in host.

Common etiological agents of Bloodstream infections:^[8]

| Bacteria | Viruses | Fungi | Some Parasites |
|--|-----------------|--|--------------------|
| Staphylococcus aureus | HIV | Candida | Plasmodium sp. |
| Coagulase negative staphylococci | Epstein-barr | Cryptococcus | Trypanosoma |
| Beta hemolytic streptococci | Cytomegalovirus | Coccidiesimmits | Babesia |
| Enterococcus sp. | etc. | Histoplasma capsulatum mucor sp. etc. | Wuchereria etc. |
| Salmonella sp. | | | |
| E.coli | | | |
| Klebsiella pneumoniae | | | |
| Proteus sp. | | | |
| S. pneumoniae (associated with pneumonia or meningitis). etc | | | |

DISCUSSION AND COCLUSION

The concept of *Krimi* is not new. From the period of *Veda* it's existence felt. *charyas* describe nomenclature, classification, sign & symptoms of *Krimis*. *Acharyas* describes *Adrasya Krimi* and these are *Shonitaja Krimi*(which means internal pathogens growing in blood); their clinical features, morphology, their invisibility to naked eyes are somewhat similar to invisible pathogens explained in modern science. so it can be concluded from above study *Adrasya krimi-Shonitaja Krimi* similar to blood stream infections in modern science.

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