

REVIEW ARTICLE ON *KEETA VISHA* AND ITS MANAGEMENT

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Article Received on 21/12/2023

Article Revised on 11/01/2024

Article Accepted on 31/01/2024

ABSTRACT

Ayurveda, an ancient Indian system of medicine, plays a crucial role in the healthcare system throughout India. It encompasses eight key branches, and among them is *Agad-Tantra*, focusing on toxicological conditions and their management. *Acharya Susruta*, in the *Kalpa Sthana* of *Susruta Samhita*, and *Acharya Vagbhata*, in *Uttarantra* of *Ashtanga Hridaya*, along with other texts, discuss *Akritrim* and *Kritrim Visha*. *Akritrim Visha* is categorized into *Sthavar Visha* (plant origin) and *Jangam Visha* (animal origin), with *Keeta Visha* falling under the latter. Among insects, comprising 75% of all animals, only 2% pose harm to humans. *Acharya Susruta* classified 67 types of *Keeta Visha* into four groups based on variety, diagnosis, and treatment.

KEYWORDS: Ayurveda, *Visha*, *Keeta visha*, Animate Poison.

INTRODUCTION

From ancient times, the intrigue around "poison" has captivated humanity, posing a constant challenge and threat to well-being and even life itself, whether knowingly or unknowingly.

Throughout the summer, rainy seasons, and warm climates year-round, individuals frequently encounter bites from mosquitoes, flies, chiggers, ticks, as well as stings from ants, bees, yellow jackets, wasps, and hornets. While these incidents are generally not severe, they can cause itching and pain, occasionally requiring emergency medical attention.^[1]

In *Samhitasa Acharya Charaka* suggests that insects are termed "*Keetas*" as they originate from the waste products like stool and urine of snakes.^[2] *Vachaspatya* defines "*Keeta*" as a type of "*Krimi*" with a visible, macroscopic body and independent leg movement. *Acharya Sushruta* delves into the topic of *Keetas* after discussing snakes (*Sarpa Danshta Visha Vigyaniya*) and rodents (*Mooshika Kalpa*). These creatures, according to

definitions, may or may not be visible to the naked eye, encompassing insects, worms, and even microbes. The term "*Keetas*" is generally considered a subtype of "*Krimi*," observable without magnification.^[3]

In broader terms, "*Keeta*" encompasses all small, visible living beings with two or more legs, with or without wings. They inhabit diverse environments, including soil, air, buildings, trees, exhibiting various shapes, colors, and behaviors such as crawling, flying, stinging, scratching, and even inflicting harm through urination on humans.

AIM AND OBJECTIVES

The purpose of this article intends to study *Keeta Visha* according to Ayurveda as well as to explore the sign, symptoms, effect on body & treatment in the view of Ayurveda.

MATERIAL AND METHOD

It is a literary review to study the spider bite and its management from all classical text and contemporary text (especially *Sushruta*) including website.

Source of Literature: *Charak samhita, Sushruta samhita, Ashtang Hridaya, Ashtang sangraha, Avabhasini-Handbook on dermatology.*

Literature review

Origin of Keeta: *Keetas* originate from the putrefied substances like urine, feces, semen, eggs, and the remains of snakes, as per *Acharya Susruta*. The formation of *Keetas* is linked to the decay of "*Shukra-Vid-Mutra-Pooti-Und*," resulting in four types: *Vayavya, Aagneya, Saumya,* and *Sankirna (Sarva-Dosha)*, each characterized by distinct traits and symptoms. In total, there are 67 types of *Keetas*. Given their diverse nature and close interaction with humans, these creatures often cause repeated cases of stinging and, in some instances, provoke anaphylactic reactions.^[4]

According to *Smahitas*

- Acharya Charaka*, in the *Charak Samhita*, emphasizes the significance of *Visha*, dedicating a separate chapter in the *Chikitsa Sthan* (Chapter 23) to elaborate on the symptoms and treatment of various *Visha* conditions. The chapter delves into the origin, classification, symptoms, and treatment of different *Keeta Visha*.
- Despite *Susruta Samhita* primarily focusing on surgery, *Acharya Susruta* demonstrates expertise in toxicology, dedicating an entire section of 8 chapters called "*Kalpa Sthana*" to this branch. The 8th chapter in *Kalpa Sthana* provides a detailed account of *Keeta Visha*, covering its classification, symptoms, and treatment.
- In the *Bhel Samhita*, the 18th chapter in *Sutra Sthana* addresses the "*Anna Raksha Adhyaya*,"

offering references to *Visha Dushta* conditions related to food, clothing, or coverings. However, there is no specific chapter on *Jangama Visha*.

- Kashyapa Samhita* mentions *Kashyapa's* role in introducing various *Agadas*, but the available text lacks a direct section on *Jangama Visha*. It does note that the *Kashyapa* mentioned in *Agadatantra* is distinct from the author of "*Vridhha Jeevaka Tantra*."
- Vridhha Vagbhata*, in the *Ashtanga Hridaya*, compiles detailed descriptions of *Keeta Visha* from *Charaka* and *Susruta Samhita*, organizing the concepts systematically in separate chapters. The 37th chapter of *Uttara Sthana* in the *Ashtanga Hridaya* provides comprehensive information on the symptoms and treatment of various *Keeta Dansha*.

Classification of *Keeta* as per *Dosha*

A. According to *Charak*^[5]

- Dushivisha keeta*
- Pranhara keeta*

B. According to *Sushruta*^[6]

- Vataja*
- Pittaja*
- Kaphaja*
- Sannipataja*

C. According to *Vagbhata*^[7]

- Vataja*
- Aagneya*
- Saumya*
- Sankirna*

Types of *Keeta*

- Vataja* – 18
- Pittaja* – 24
- Kaphaja* – 13
- Sannipataja* – 12

According to *Acharya Vridhha Vagbhata, The four type of Keeta (Insects)*^[8]

<i>Vayavya</i>	<i>Aagneya</i>	<i>Saumya</i>	<i>Sankirna</i>
<i>Kumbhinas</i>	<i>Kaundinyak</i>	<i>Vishvambhar</i>	<i>Tungnasa</i>
<i>Tundikeri</i>	<i>Kanabhak</i>	<i>Panchashuska</i>	<i>Chipilak</i>
<i>Shringi</i>	<i>Varati</i>	<i>Panchakrishna</i>	<i>Talak</i>
<i>Satakulirak</i>	<i>Patravrisica</i>	<i>Kokil</i>	<i>Vahak</i>
<i>Ucchitiang</i>	<i>Vinasika</i>	<i>Sthaireyak</i>	<i>Kosthagari</i>
<i>Agninaama</i>	<i>Brahmnika</i>	<i>Prachalak</i>	<i>Krimikar</i>
<i>Chichiting</i>	<i>Bindul</i>	<i>Vatabh</i>	<i>Mandalpuchchak</i>
<i>Mayurak</i>	<i>Bhramar</i>	<i>Kitibh</i>	<i>Tundanabha</i>
<i>Ahij</i>	<i>Brahyaki</i>	<i>Jati</i>	<i>Sarshapak</i>
<i>Urabhrak</i>	<i>Pichchit</i>	<i>Suchimukh</i>	<i>Madguli</i>
<i>Aavart</i>	<i>Kumbha</i>	<i>Krishnagodha</i>	<i>Sambuk</i>
<i>Sarika</i>	<i>Varchkeeta</i>	<i>Kashayavasik</i>	<i>Agnikeet</i>
<i>Mukhavaidla</i>	<i>Arimedaka</i>	<i>Abhra</i>	
<i>Saraavakurda</i>	<i>Dundubhik</i>		
<i>Parush</i>	<i>Padyakeeta</i>		
<i>Chitrashirsh</i>	<i>Makar</i>		
<i>Jarak</i>	<i>Shatapadak</i>		

Raktaraji	Panchal		
	Pakamatsya		
	Sukshmatund		
	Gardabhi		
	Kleeta		
	Krimisarari		
	Utklesak		

According to Acharya Susruta the following Keeta (Insects) are mentioned according to Dosha predominance.^[9,10]

Vataja	Pittaja	Kaphaja	Sannipataja
Kumbhinas	Kaudinyaka	Visvhambhar	Tunginasa
Tundikeri	Kanabhak	Panchashuki	Vichilak
Shringi	Varati	Panchakrishna	Talak
Satakulirak	Patravrisca	Kokil	Vahak
Ucchiting	Vinasika	Saireyak	Kosthagari
Agni naama	Brahmnika	Prachalak	Krimikar
Chichiting	Bindul	Valabh	Mandalapuchchak
Mayurika	Bhramar	Kitibha	Tundanabh
Abhiraji	Bahyaki	Suchimukh	Sarshapik
Urabhra	Pichchita	Krishnagodha	Valguli
Aavartak	Kumbhi	Kashayavasik	Sambhuk
Sarika	Varchkeeta	Gardhbhak	Agnikeet
Mukhavaidal	Arimedaka	Trotak	
Saraavakurda	Padmakeeta		
Parush	Dandubhik		
Chitrashirshak	Makar		
Shatabaahu	Shatapadak		
Raktaraji	Panchalak		
	Pakamatsya		
	Krishnatund		
	Gardabhi		
	Kleeta		
	Krimisarari		

Other Keeta (Insects) mentioned in Susruta Samhita are^[11]

1. Kanabha (Wasp): 4- Trikanta, Karini, Hastikaksha, Aparajita.
2. Godherak (Garden lizard): 5 Pinganash, Bahuloma, Mahashira, Nirupam.
3. Masaka (Mosquito): 5-Samudra, Parimandala, Hastimashaka, Kishna, Parvatiya.
4. Pipilika (Ant): 6- Sthulashirsha, Samvahika, Brahmanika, Angulika, Kapila, Chitravarnas.
5. Makshik (Bee): 6- Kantarika, Krishna, Pingala, Madhulika, Kashayi, Sthalika
6. Galgolika (House lizard): 7-Shweta, Krishna, Raktaraji, Raktamandala, Sarvasweta, Sarsapika.
7. Shatapadi (Centipede): 8-Parusha, Krishna, Chitra,

- Kapila, Pitika, Rakta, Shweta, Agniprabha.
8. Manduk (Frog): 8-Krishn, Shar, Kuhak, Harit, Rakta, Yavvarnabha, Bhrikuti, Kotika.
 9. Visvambhara (Scorpion like creature) -1
 10. Ahinduka (A kind of flying insect) – 1
 11. Kandumaka (A kind of flying insect) – 1
 12. Sukvrinta (A kind of flying insect) – 1
 13. Vrischika (Scorpion) – 30

Incurable Keeta^[12]

According to Sushruta, the following Keeta's bite is incurable: Godheraka, Sthalika, Shweta, Agniprabha, Bhrikuti, Kotika,

General symptoms of Keeta Visha: Common Biting and Stinging insects

Venomous (Stingers)	Non-venomous (Biters)
Bees	Mosquitoes
Wasps	Fleas
Hornets	Ticks
Yellow jackets	Lice
Fire ants	Scabies
	Bed bugs

Characteristics of Bites/Stings

Symptoms	Venomous	Non-venomous
Pain	Always	Uncommon
Redness	Can be intense	Mild or absent
Itching	Sometimes	Always
Swelling	Can be intense	Mild or absent
Allergic reactions	Common	Rare

Ayurvedic classics provide insights into the symptoms and treatments for various types of *Keetas*, broadly categorized as *Dushivishaja* and *Pranahara*, or based on *Doshik* predominance. Commonly encountered cases in clinical practice involve *Keetas* like *Loota*, *Vrischika*, *Mashaka*, *Makshika*, *Shatapadi*, *Pipeelika*, which typically exhibit symptoms of *Dushivisha Keeta*. More complex cases with anaphylactic reactions, less commonly encountered, fall under *Pranahara Keeta* and are often challenging to identify, remaining labelled as "Avyakta."

Acharya Charaka notes that insects in the mild chronic category (*Dooshi Visha*) cause colour changes (red, white, black, or brownish-black) in the affected area, accompanied by rashes, itching, burning sensation, erysipelas, suppuration, and sloughing. Fatal category (*Pranahara*) insect bites lead to expanding edema, akin to snake bites, with a strong odour and bleeding.

Symptoms include pain, heavy eyes, fainting, and dyspnoea. In cases of chronic poisoning by insects (*Dooshi Visha*), patients experience intense thirst and loss of appetite.^[13]

Acharya Sushruta enumerates various symptoms caused by poisonous *Keetas*, including fever (*Jwara*), body ache (*Angamarda*), goosebumps (*Romanch*), vomiting (*Chhardi*), diarrhea (*Atisara*), thirst (*Trishna*), burning sensation (*Daha*), fainting (*Murchha*), yawning (*Jrimbha*), trembling (*Kampanna*), breathlessness (*Swasa*), hiccups (*Hikka*), excessive cold (*Atisheeta*), swelling (*Shopha*), circular rashes (*Mandala*), skin conditions (*Dadru*), and others.^[14]

Acharya Vagbhatta emphasizes that prominent symptoms in all types of *Keeta Damsha* include circular rashes (*Karnika*), swelling (*Sopha*), fever (*Jwara*), itching (*Kandu*), and loss of appetite (*Arochaka*).^[15]

Keeta Visha - Dosha relationship.^[16]

Dosha predominance	Symptoms
<i>Vataja</i>	heart pain, pain in joints and bones, tremors, dyspnoea, colour of the skin becomes black, and stiffness
<i>Pittaja</i>	heart burn, loss of sensation, bitterness of mouth, muscle fatigue, tenderness of tissues following red and yellow colour
<i>Kaphaj</i>	<i>Vamana</i> , <i>Arochaka</i> , <i>Peenus</i> , coldness, sweetness of mouth, salivation

Keeta Visha Adhishtan.^[17]

Type	Adhishtan
<i>Vatik keeta</i>	<i>Pakshavat</i>
<i>Paittik keeta</i>	<i>Sparsha</i>
<i>Kaphaj keeta</i>	<i>Mukhadamsha</i>
<i>Sannipataja keeta</i>	All of the above

Principle of Keeta Dansha treatment

Vitiation of *Doshas* is to be understood from the symptoms present and treatment should be with drugs that have opposing properties of the *Doshas* deranged.^[18]

Treatment of Keeta Visha according to Dosha

Dosha	Treatment
<i>Vata</i>	Application of <i>tila</i> (Sesamum seeds) on the site, anointing with oil, fomentation either by steam pipe or ball of cooked rice and nourishing foods
<i>Pitta</i>	Cold irrigation and cold potency topical applications
<i>Kapha</i>	Scraping, incising fomentation and administration of emetics

Some examples of Keeta their Symptoms and Treatment.^[19]

Keeta	Symptoms	Treatment
<i>Makshika</i>	Itching, swelling, burning sensation and pain	Application of <i>lepa</i> of <i>krishna valmeeka</i> + <i>gomootra</i> . <i>Tagara</i> + <i>nagara</i> + <i>nagakesara</i> , <i>Maricha</i> for <i>pana</i> and <i>lepana</i>

<i>Mashaka</i>	Itching, slight oedema at the site of bite and mild pain	<i>Krishna valmeeka</i> mixed with <i>gomutra</i> for <i>lepa</i> .
<i>Shatapadi</i>	Oedema at the site of bite, sweating, pain and burning sensation	<i>Guduchiadi kashayam</i> , <i>dasanga gutika</i> , <i>vilwadi gutika</i> internally. <i>Sathdoutaghritam</i> , <i>varachurnam</i> externally.
<i>Pipeelika</i>	Swelling along with burning sensation and inflammation locally as after contact with fire	Black salt along with salt, <i>shunti</i> , <i>chillie</i> along with <i>karpoora tulasi swarasa-</i> for <i>lepa</i> . Also, <i>pana</i> and <i>lepa</i> of <i>pippali</i> , <i>maricha</i> , <i>shunti</i> , <i>haridra</i> taken in equal quantities and ground with tamarine cures ant bites.
<i>Kanabha</i>	Extremely painful and gives rise to swelling, aching and heaviness of the body and blackish discolouration locally.	<i>Lepa</i> or paste made of <i>mukkuoti</i> and butter. Both types of <i>neelitulasi</i> as <i>lepa</i> . <i>Dronapushpi swarasa</i> with <i>ghrita</i> along with <i>kadaliphala</i> .

In all the above cases, apart from the above commonly used drugs such as *Dooshivishari Agada*, *Vilwadi Gutika*, *Dashanga Gutika*, etc can be used internally and *Ksheerivriksha Twak*, *Raktachandana*, *Vilwadi*, *Shatadhauta Ghtita*, *Shigrupunarnavadi Choorna*, *Lodrasevyadi* etc can be used for external application depending on the condition.

RESULTS AND DISCUSSION

Acharyas have outlined the prognosis of *Keeta* envenomation based on the severity of *Dosha* vitiation, suggesting that a higher number of affected *Doshas* indicates a poorer prognosis. They have provided treatment protocols aimed at mitigating *Dosha* aggravation, thereby improving the overall prognosis. The flexible nature of these treatment modalities accommodates variations in *Doshik* predominance. By adhering to the comprehensive methods outlined in the *Samhitas*, one can achieve more effective treatment outcomes for *Keeta Visha*.

CONCLUSION

By studying above, it seems that spider, scorpion, mosquitoes, flies, fleas, ants, lizards, etc. are included under *Keetas*. Their poison causes more manifestation in man. The treatment is also more important. Besides this, several creatures seen in our surrounding, called *Keetas*, cause certain poisonous illness to man. Their number and name not fully identified. *Agad tantra* has simplified approach towards *Keetas* and has included the name, classification, *Dosha* in various *Keetas*, clinical features and its treatment protocol of *Keetas* bite.

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