



CONCEPTUAL STUDY ON THE AYURVEDIC REVIEW ON *KEETA VISHA* AND ITS *CHIKITSA*

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ABSTRACT

Ayurveda, an ancient Indian medical system with eight important branches, includes *Agadatantra*, which focuses on identifying, preventing, diagnosing, and treating manifestations caused by various poisons: *Sthavara Visha* (static poisons), *Jangama Visha* (moving poisons), *Krithrima Visha* (artificial poisons), and *Khanija Visha* (mineral poisons). This branch draws from the teachings of Acharyas Charaka, Susrutha, Vagbhata, Madhavakara, Bhavamishra, and regional texts. These texts discuss the origins of different types of poisons, such as *Sthavara Visha* (e.g., plants like Vatasambha), *Jangama Visha* (e.g., animals like snakes and insects), and *Krithrima Visha* (e.g., artificial or man-made poisons). Among *Jangama Visha*, *Keeta Visha*, related to arthropods, is a significant category, with Acharyas categorizing it into four groups and identifying 67 different types of insects. Although arthropods constitute a large part of living animals, only a small percentage of insect species are harmful to humans. *Keeta Visha* can lead to various symptoms, from localized effects to severe systemic issues, including swelling, lumps, rashes, itching, and even death. Diagnosing and treating *Keeta Visha* can be challenging due to the variety of insects and regional variations in their effects. This article aims to compile the signs and symptoms of *Keeta Visha* and the treatment approaches mentioned in various classical texts.

KEYWORDS: *Agadtantra, Sthavar Visha, Jangam Visha, Keeta Visha.*

INTRODUCTION

Acharya's have included *Keeta* under *Jangama Visha*. According to *Acharya Charaka*, insects are also called *Keeta*. They are originated from the waste products like stool and urine of the snakes.^[1] According to *Susrutha*, *Keeta* are born from semen, excreta, urine, foul smelling, eggs of snakes.^[2] Their formation is alleged as putrefaction of 'Shukra-Vid-Mutra-Pooti-Und-Sambhava'. Accordingly, *Keeta* are of four types and according to their *Prakruti* and the symptoms they produce, they are called as *Vayavya, Aagneya, Saumya* and *Sankirna (Sarva-Dosha)*. Overall, the *Keeta* are 67 in numbers. Since they are of incalculable types and their habitat is open with the humans, it causes repeated stinging cases, and anaphylactic reactions too, in a few people^[3] *Keetas* are born from the semen, excreta, urine, fowl smelling and eggs of snakes. They possess features

of air, fire, water and of many kinds.^[4] According to modern, venomous insect are three orders of toxicologically importance in class insecta Hymenoptera, Lepidoptera, Coleoptera.^[5]

AIM AND OBJECTIVES

To study about types of *Keetas* described in our Ayurvedic texts. To evaluate and discuss about *Keeta Visha* and their sign, symptom, effect on body.

MATERIAL AND METHOD

The study on *Keeta Visha* and their effect on our body was done with the help of with the help of our Ayurvedic text books especially *Sushrut* and conceptual and summarised data of different modern books and different review articles.

Historical review^[6]**A) Samhita Kala**

Certainly! These ancient Indian medical texts, Charak *Samhita*, Sushruta *Samhita*, Bhel *Samhita*, and Kashyapa *Samhita*, all discuss the importance of understanding and treating poison-related conditions alongside other diseases.

1. Charak *Samhita*: Acharya Charaka dedicates an entire chapter (the 23rd chapter of *Chikitsa Sthan*) to explain the symptoms and treatment of various poison-related conditions (*Visha*). This chapter covers the origin, classification, symptoms, and treatment of different types of poison.
2. Sushruta *Samhita*: Although *Sushruta Samhita* primarily focuses on surgery, *Acharya Sushruta* also delves into the topic of poison. He dedicates eight chapters in the "*Kalpa Sthana*" to toxicology, detailing the classification, symptoms, and treatment of poison, especially *Keeta Visha*, in the 8th chapter.
3. Bhel *Samhita*: In *Bhel Samhita*, there's a chapter in the *Sutra Sthan* (the 18th chapter) called "*Anna Rakhsa Adhyaya*," which mentions the protection of food and clothing from contamination or poisoning but doesn't have a specific chapter on *Jangama Visha* (poison from living creatures).
4. Kashyapa *Samhita*: Although references to Kashyapa's contributions to remedies for poison are found in various texts, the available *Kashyapa Samhita* doesn't have a dedicated section on *Jangama Visha*. However, it acknowledges that Kashyapa introduced various remedies used for different conditions, including those related to poison, but it's distinct from the author of "*Vridhdha Jeevaka Tantra*."

B) Sangraha Kala

During the "*Sangraha Kala*," which is considered a significant period in Indian medicine, two important works, *Ashtanga Sangraha* and *Ashtanga Hridayam*, stand out. *Vridhdha Vagbhata* compiled detailed information about *Keeta Visha* (poison from living creatures) from Charaka and Sushruta *Samhita* and organized these concepts into separate chapters.

In *Ashtanga Hridaya*, you can find a thorough explanation of the symptoms and treatment of various

Keeta Dansha (insect bites or stings) in the 37th and 43rd chapters of *Uttara Sthana*.

Origin of Keeta

As for the origin of *Keeta*, it is believed that they come from the putrefaction of substances like urine, feces, semen, eggs, and snake cadavers. *Acharya Sushruta* suggests that *Keeta* originate from snakes and that their formation involves the decay of various substances. There are four main types of *Keeta* - *Vayavya*, *Aagneya*, *Saumya*, and *Sankirna* (*Sarva-Dosha*). In total, there are 67 types of *Keeta*. Due to their diverse nature and proximity to humans, *Keeta* stings can lead to frequent cases of stinging and sometimes even anaphylactic reactions in some individuals.^{[7],[8]}

CLASSIFICATION OF KEETA AS PER THE DOSHA

According to Acharya Charka^[9]

1. *Dushivisha Keeta*
2. *Pranhara Keeta*

According to Acharya Vagbhata^[10]

1. *Vayavya*
2. *Aagneya*
3. *Saumya*
4. *Sankirna*

According to Acharya Susruta^[11]

1. *Vataja*
2. *Pittaja*
3. *Kaphaja*
4. *Sannipataja*

Types of Keeta

1. *Vataja* – 18,
2. *Pittaja*– 24,
3. *Kaphaja*– 13,
4. *Sannipataja* - 12

The majority of insects or "*Keeta*" have neurotoxic properties, meaning they affect the nervous system. Some are vasculo-toxic, which means they affect blood vessels, and others can trigger allergic reactions. Spiders, in particular, are more vasculotoxic, leading to severe inflammation, often associated with *Pitta-Kapha* imbalances. On the other hand, scorpions are more neurotoxic, causing severe neurological reactions, and they are often linked to *Vata-Kapha* imbalances. These distinctions in their toxic effects are described in detail. Other insects typically cause milder poisonous reactions, which are a combination of mild neurotoxic, vasculotoxic, and allergic responses.^[12]

Table 1: According to Acharya Vridhdha Vagbhata, The Four type of Keeta (Insects) are as Follows.^[13]

VAYAVYA	AAGNEYA	SAUMYA	SANKIRNA
<i>Kumbhinas</i>	<i>Kaundinyak</i>	<i>Visvvhambhar</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>Patravrisca</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>Mandalapuchchak</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>Kumbhi</i>	<i>Krishnagodha</i>	<i>Sambuk</i>

Sarika	Varchkeeta	Kashayavasik	Agnikeet
Mukhavaidla	Arimedaka	Abhra	
Saraavakurda	Dundubhik		
Parush	Padyakeeta		
Chitrashirsh	Makar		
Jarak	Shatapadak		
Raktaraji	Panchal		
	Dundubhik		
	Pakamatsya		
	Sukshmatund		
	Gardabhi		
	Kleeta		
	Krimisarari		
	Utkleshak		

Table 2: According to Acharya Sushruta the Following Keeta (Insects) are Mentioned according to Dosha Predominance.^[14,15]

VATAJ	PITTAJ	KAPHAJ	SANNIPATAJ
Kumbhinas	Kaundinyak	Visvhvambhar	Tunginasa
Tundikeri	Kanabhak	Panchashukl	Vichilak
Shringi	Varati	Panchakrishna	Talak
Satakulirak	Patravrisca	Kokil	Vahak
Ucchitiang	Vinasika	Saireyak	Kosthagari
Agni naama	Brahmnika	Prachalak	Krimikar
Chichiting	Bindul	Valabh	Mandalapuchchak
Mayurika	Bhramar	Kitibh	Tundanabh
Abhiraji	Bahyaki	Suchimukh	Sarshapik
Urabhra	Pichchita	Krishnagodha	Valguli
Aavartak	Kumbhi	Kashayavasik	Sambhuk
Sarika	Varchkeeta	Gardhbhak	Agnikeet
Mukhavaidal	Arimedaka	Trotak	
Saraavakurda	Padmakeeta		
Parush	Dundubhik		
Chitrashirshak	Makar		
Shatabaahu	Shatapadak		
Raktaraji	Panchalak		
	Pakamatsya		
	Krishnatund		
	Gardabhi		
	Kleeta		
	Krimisarari		
	Utklesak		

Other Keeta (Insects) Mentioned in Sushruta Samhita Are^[16, 17]

1. Kanabha (Wasp) – 4- Trikanta, Karini, Hastikaksha, Aparajita.
2. Godherak (Garden lizard) – 5Pinganash, 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

According to Kriyakoumudi^[18]

Some more types of Keeta are mentioned they are as follows:

Brahmnik (Arana)
Teratta

Tottarotti
 Njandu (crab)
 Vettalan Karimbada
 Koora (*Americana periplanata*)

Incurable Keeta^[19]

According to Sushruta, the following Keeta's bite is incurable:

Godheraka, Sthalika, Shweta, Agniprabha, Bhrikuti, Kotika.

SYMPTOMS OF BITES OF VISHA KEETA IN GENERAL

According to Acharya Charaka, insects categorized as mild toxins (*Dooshi Visha*) can cause discoloration in the bitten area, appearing as red, white, black, or brownish-black patches on the skin. This often leads to rashes, accompanied by itching, burning sensations, erysipelas (skin infection), suppuration, and tissue sloughing. On the other hand, insects falling into the severe toxins (*Pranahara*) category create expanding oedema similar to snake bites. This condition is characterized by a strong odour and bleeding, causing pain, heavy eyes, fainting, and difficulty in breathing. Patients affected by chronic poisoning from insect bites (*Dooshi Visha*) experience intense thirst and loss of appetite.^[20]

According to Acharya Sushruta, poisonous insect bites result in various symptoms, including fever (*Jwara*), body pain (*Angamarda*), hair standing on end (Romanch), vomiting (*Chhardi*), diarrhea (*Atisara*), excessive thirst (*Trishna*), burning sensation (*Daha*), fainting (*Murchha*), hiccup (*Jrimbha*), tremors (*Kampanna*), breathing difficulties (*Swasa*), hiccups (*Hikka*), extreme coldness (*Atisheeta*), swelling (*Shopha*), skin disorders (*Mandala, Dadru, Karnika, Visarpa, Kitibha*), and more.^[21]

Acharya Vagbhatta mentions that regardless of the type of insect bite, prominent symptoms include itching (*Kandu*), swelling (*Sopha*), fever (*Jwara*), loss of appetite (*Arochaka*), and more.^[22]

PRINCIPLE OF KEETA DANSHA TREATMENT

Vitiating of *Doshas* is to be understood from the symptoms present and treatment should be with drugs that have opposing properties of the *Doshas* deranged.^[23]

TREATMENT OF KEETA VISHA ACCORDING TO DOSHA

1. In case of poison predominant with *Vata*, application of *Tila* (sesamum seeds) on the site, anointing with oil, fomentation either by steam pipe or ball of cooked rice and nourishing foods are the treatments ideally suited.
2. Poison predominant with *Pitta* should be controlled with cold irrigation and cold potency topical applications.
3. Poison predominant with *Kapha* should be treated with scraping, incising fomentation and

administration of emetics.^[24] The person who is bitten by the *Visha Keeta*, after doing *Sansodhana*, application of *Lepa* of the bark of *Kshiri vrikshas* (*Vata, Pippal, Gullara, Pakkar, Paras Pippal*) should be preferred for treatment of poisoning. It is claimed all types of inflammation, burning sensation, pain, fever, will be subsides with the application of Pearl.^[25] Insect venom is highly complex, containing a wide array of compounds, including proteins, peptides, enzymes, and smaller molecules, all present in small quantities. It's impossible to detail every single component, but we can highlight some major constituents found in the venoms of various insects:

COMPOSITION OF Various INSECT VENOM as Follow

- Bee Venom: Bee venom is mostly water (about 88%) mixed with venom (12%). The primary toxic component in bee venom is melittin, which disrupts cell membranes, leading to cell damage. Additionally, phospholipase-A breaks down phospholipids in cell membranes, causing cell destruction. Hyaluronidase enhances venom penetration by breaking down protein-polysaccharide complexes. Histamine triggers allergic responses, resulting in itchiness and inflammation.
- Mosquito Venom: Mosquito venom can cause hypersensitivity reactions due to non-toxic proteins found in mosquito saliva.
- Scorpion Venom: Scorpion venom is composed of various components, including mucopolysaccharides, hyaluronidase, phospholipase, serotonin, histamine, enzyme inhibitors, and neurotoxin peptides.
- Ant Venom: The primary component in ant venom is formic acid.
- Lizard Venom: Lizard venom is a complex mixture containing serotonin, arginine esterase, hyaluronidase, phospholipase-A2, and neurotoxin components or coagulopathic enzymes.

These diverse compounds play different roles in the effects of insect venoms on the human body.

CONCLUSION

Our ancient Acharyas observed that creatures like spiders, scorpions, mosquitoes, flies, fleas, ants, lizards, and more fall under the category of "*Keetas*." These creatures have poisons that can cause severe effects on humans, requiring significant attention in their treatment. Additionally, there are numerous small creatures in our surroundings, also referred to as *Keetas*, which can lead to various forms of poisoning in humans. Although we may not have identified all these creatures by name, our Acharyas, through their texts, have provided nomenclature, details about different types of *Keetas*, their associated *Doshas*, and the treatments specific to each. This knowledge of *Keetas* observed by the Acharyas can guide us in diagnosing and effectively

treating *Keeta* bites. In this article, we aim to compile information on the different types of *Keetas*, their classification, treatment, and characteristics that help identify them.

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