



A CRITICAL REVIEW ON *LUTA VISHA* (SPIDER POISON): AN AYURVEDIC APPROACH

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ABSTRACT

Ayurveda is not only a medical science but also a way of healthy living. Indian system of medicine plays an important part in health care system all over India. *Ayurveda* is an ancient Indian system of medicine having eight important branches. *Agad tantra* is among one of them which deals with toxicological conditions and their management. Acharya *Susruta* in *Kalpasthana* of his work *Susruta Samhita*, and Acharya *Vaaghata* in *Uttaratantra* of his work *Ashtaanga Hridaya*, and in other classics and regional texts have narrated regarding the origin of *Visha* and *Luta Visha*. Spiders are carnivorous arthropods that coexist with humans. There are more than 30,000 species of spiders and most of them are venomous. Spiders rarely transmit communicable diseases, but they also play an important role in the ecosystem by consuming other arthropods, such as mosquitoes and flies which transmit diseases. *Agada Tantra* has simplified approach towards *Luta's* (spiders) and has included the classification, clinical features (general and specific) and its treatment (general and specific) protocol. Acharya *Susruta* described *Luta Visha* under *Jangama Visha* and explained 16 types of *Luta*. In this article an attempt is made to conceptualize spider envenomation according to Ayurveda which will help not only for differential diagnosis of spider bites but also the easy availability of herbal medicine treatment.

KEYWORDS: *Luta*, *Luta visha*, Spider, Spider bites.

INTRODUCTION

Agada Tantra (Toxicology) part of Ayurveda deals with the study of poisons, their actions, their detection and treatment. It also deals with signs, symptoms and management of poisoning, resulting from the bites of snakes, insects and worms, spiders, rodents etc. and with various other poisons produced by improper combinations of substances or drugs. There are approximately 200 species from 20 genera of spiders worldwide, which can cause severe human envenomation, with severe dermonecrosis, system toxicity and death. In India approximately 59 different Family of spiders are found, which include more than approximately 600 different spiders.^[1] The most venomous spider found in India is the Fringed-Ornamental Tarantula which can cause excruciating pain, muscle cramps and leads to coma.

Mythology of origin of Luta

On analyzing the various classics it can be found that various mythological concepts are given for the origin of the creature of *Luta*. According to *Susrutha* acharya the drops of sweat on the forehead of *Vasishta* angered by *Viswamitra* which fell on the cut grass transformed themselves into *Luta*^[2] (S.Ka.8/88-93).

According to *Ashtanga samgraha*, the spark of fire that sprang out from the bodies of *Asuras* (Demons) during the burning of *Khandava* forest became *Lutas* (Spiders), or blebs (vesicles) that develop on the body by ingestion of contaminated (Poisonous) food area known as *Luta*^[3] (As.Sa.U.44/2-4).

MATERIALS AND METHODS

The study on *Luta-Visha* (spider-poison) was done with the help of Ayurvedic Samhitas especially *Susruta Samhita* to conceptualize and summarize the data of different samhita in this article. The MEDLINE research and some case-series were reviewed to study cases of spider envenomation.

RESULTS

Classification: Regarding the total number of *Luta* Acharyas have different opinions.

1. As per *Susrutha Samhita*^[4], 16 types of *Lutas* are there and these are classified into two groups according to the prognostic point of view.

- a) *Krichra sadhya* (curable with difficulty)
- b) *Asadhya* (Incurable).

In *As.H*, 16 types of *Lutas* and in *As.S*. About 28 types of *Lutas* are described. These 28 types are grouped into

four consisting of equal number of species. *Vaatika* or *Vayavya* (*vata* vitiation), *Paitika* or *Agneya* (*pitta* vitiation), *Sleshmika* or *Saumya* (*kapha* vitiation) and *Sannipatika* or *Mishrika* (vitiation of *vata*, *pitta* and *kapha* at the same time).

Vaghbata in AH, in the context of enumeration of *Luta* quotes various schools of thoughts as 16,28,1000 or innumerable and conclude that the reckoning the venemocity and harmfulness *Luta* are only one type. Vaghbata again explains *vata*, *pitta*, *kapha* and *sannipatika* on the basis of *dosha* predominance and *Vata*, *pitta*, *kapha*, are *Krichra sadhya* and *sannipatika* is *Asadhya*. Another classification is also based upon the duration at which *Luta* bring about death to the victims unless proper treatment are not given.^[5]

2. Based on *Vishaprabhava* (action of poison)^[6]

Tikshna Visha (acutely and violently): Occurrence of death is within 7 days.

- *Madhyama Visha* (moderate): Occurrence of death is within 7 to 10 days.

- *Manda Visha* (mild): Occurrence of death is within 15 days

In Prayoga samuchaya, Jyotsanika, Kriyakoumudi, the number of *Lutas* is 24, among them four are considered as incurable and can cause death even without close contact. Their description about severity is described as one will die if he sees one variety of *Luta*, one can kill the victim if it sees the person, one kills the person if it gets the smell of the person and one kill the person whose image falls on its body.

Table no. 1 Classification of *luta* according to dosha predominance.^[7]

Agneya	Soumya	Vayavya	Sannipatika
Kapila	Pandura	Kumuda	Kakani
Agnimukhi	Rakthapadika	Alavisha	Enapadi
Peetha	Bhringa	Raktha	Laja
Padma	Pinga	Chitra	Vaidehi
Moothra	Thrimandala	Santhani	Jalani
Sitha	Poothi	Mechaka	Malaguna
Asitha	Veera	Kasana	Suvarna

3. Classification according to the origin of *luta*.

1. Swedajam
2. Andajam
3. Udbhijam

4. Classification According To Prognosis^[8] (S.K. 8/ 95-100)

1. Krichrasadya - 8 in number
2. Asadya - 8 in number

Table no 2 Classification of *luta* according to *sadhya asadhyatha*.^[9]

Sl. No.	Krichra Sadhya Lutas	Asadhya Lutas
1	Trimandala	Souvarnika
2	Shweta	Laajaa varna
3	Kapila	Jalini
4	Peetika	Eni padi
5	Aala visha	Krishna
6	Mootra visha	Agni varna
7	Rakta	Kaakanadaka
8	Kasana	Malaguna

5. Classification According To the Potency of Poison (*Visha Veerya*)^[10]

(A.H.U.37/54)- Teekshna (highly potent) Madyama (medium) Avara (low potent)

6. Classification According To the effect of poisoning.

1) Charaka- a) *Dooshivisha* type (slow poisoning), b) *Pranahara* type (causing death)

2) Kriyakoumudi- a) *Luta visha* which affects *rakta*(blood) b) *Luta visha* which affects *Nadi*(Nerve)

Table No 3 *Luta visha adhishtanas* according to various texts

Text	Swasa	Damstra	Shakrit	Mootra	Sukra	Lala	Nakha	Artava
Susruta Samhita	-	+	+	+	+	+	+	+
Ashtanga Sangraha	+	+	+	+	+	+	+	+
Ashtanga Hridaya	+	+	+	+	+	+	+	+
Prayoga Samuchaya	+	+	+	+	+	+	+	+

Clinical Features

1. **General Features:** Poisons of spiders could vitiate all the three *doshas*, but there is predominance of vitiation

of *pitta* and *kapha dosha* respectively. The general features of *Luta* bites are, appearance of a round shape with rash in white-black or red or yellow or bluish in

color, soft elevated, its center is either black or blue and resembles as a net at its edges, spreading in nature like *visarpa* (erysipelas), swollen, with burning sensation and severe pain, fever, undergoes quick ulceration or suppuration, exudation, sloughing, destruction of muscles, causes the wound if exudation gets touched to the other healthy parts.^[11]

2. Specific Features

a) According to Dosh Vitiation^[12]

- **Vatika or Vayavya Luta:** rough, blue, accompanied with cutting pain in the joints and fever.

b) According to site of poison in Luta

S.No.	Adhishtana	Symptoms
1.	Swasa (expired air)	Fever, Burning sensation and agonizing Pain ^[10]
2.	Damshtra (fangs)	Discoloured, rough, static oedematous lesion with shooting pain and burning sensation ^[10] . Rough, discoloured (pale), extreme induration. ^[9]
3.	Sakrit (faeces)	Putrified smell, itching, burning and tingling sensation, sudden pus formation and mimics <i>pilu</i> fruit Pustules or boils mimicking the ripened <i>amalaki</i> or <i>pilu</i> fruit ¹
4.	Mootra (urine)	Edematous, foul smelling, spreading cracked lesion with blackish discoloration in the center and reddish in the periphery ^[10] . Cracked lesion with blackish discoloration in the middle and reddish in the periphery ^[9]
5.	Sukra (Semen)	Rough edematous lesion with severe pain. Pustules or boils mimicking the ripened <i>amalaki</i> or <i>pilu</i> fruit. ^[10]
6.	Lala (saliva)	Small, soft, itching induration with slight pain. ^[10] Non spreading, superficial, Indurate area with itching and slight pain. ^[9]
7.	Nakha (Nails)	Itching, burning sensation and with Nodules ^[10] Swelling, itching, burning sensation, goose flesh ^[9]
8.	Arthavam (Ovum)	Bright reddish lesion ^[10] Pustules or boils mimicking the ripened <i>amalaki</i> or <i>pilu</i> fruit ^[9]

c) According to Sadhya-asadhyata (prognosis)^[10]

- **Kruchasadhya Luta:** The bite from these spiders results in aching pain in the head, pain and itching at the site of bite and symptoms peculiar to the aggravated *vata* and *kapha*.

- **Asadhya Luta:** The bites from these spiders are marked by bleeding, fever, burning sensation, diarrhea, and disorders due to the concentrated action of all the

- **Paitika or Agneya Luta:** Burning sensation, thirst, vesicles, fever, delusion, high temperature, reddish and yellow colour, exudation, swelling like grape fruit.

- **Sleshmika or Saumya Luta:** hard pale swelling like a fruit of *parooshaka*, more of sleep, rigors and fever, cough and severe itching.

- **Sannipatika or Mishrika Luta:** These are also known as *Upadika luta*. It causes vitiation of three *doshas*. The poison of these *luta* spread rapidly causing fire like burning sensation all over body and is present with all the poisoning symptoms of *Vatika*, *Paitika* and *Sleshmika*. The symptoms arise as per predominance of the *Prakriti* of the patient.

three deranged *doshas* of the body and the bitten part putrifies.

d) Stages of Spider Envenomation: Acharya Vagbhata described different stages of spider envenomation in a day- wise pattern. In spider bites upto half a day the symptoms does not manifest and from the first day to the seventh day, the following features can be seen^[9]: (A.H.U.37/60-64).

Table No.4 Features Of Luta Visha According To Duration^{[9], [10]}

DAY	SIGNS AND SYMPTOMS
Day 1	Mild itching sensation as well as shifting and indistinctly coloured urticarial patches appear locally. (S) It appears as though pricked by a needle, with no manifestation of colour, moveable slightly, having itching sensation and pain. (V)
Day 2	The seat of the bite becomes swollen at the periphery with depression in the center and the clinical features become more manifested. (S) The edges are raised, surrounded by eruptions, with well manifested colour, depressed in the center, is itchy and resembles a tumor. (V)
Day 3	On the third day, the actual symptoms of poisoning sets in. (S)

	There is a red patch in the shape of a saucer, associated with fever, horripilations, severe pricking pain and bleeding from the hair follicles (V)
Day 4	On the fourth day the poison gets aggravated. (S) Profound swelling, producing temperature, dyspnoea and giddiness (V)
Day 5	Various disorders of the aggravated poison are produced (S) It gives rise to symptoms of poisoning related/concerned to the dosas. (V)
Day 6	The poison, widely spreading, completely envelops all the vital regions including the marmas. (S) It spreads to the vital spots(V)
Day 7	The poison, diffused throughout the whole organism and being highly aggravated, kills the victim. (S) It destroys life(V)

Treatment^[13]

The treatment measures for Luta visha is as follows:

- **Nasya (Snuffing)^[9]**: Nasal drops from herbs *Shyama* (*Ocimum tenuliforum*), *Yavaphala* (*Trachyspermum ammi*), seeds of *Phanijjaka* (*Hyocymus niger*) and *Shirisha* (*Albizia lebbek*) macerated with the juice of *Vartaka* (*Solanum melongena*) is used to remove the poison. And it also helps in relieving heaviness of head, swelling, salivation and lock jaw.^[10]

- **Anjanam^[9]** (Medicated Collyrium): In disorders of vision, swelling and itching are present at the time of onset of sleep, then the collyrium prepared from *Vacha* (*Acorus calamus*), *Trikatu* (*Zingiber officinale* + *Piper longum* + *Piper nigrum*), *Triphala* (*Emblica officinalis* + *Terminalia bellerica* + *Terminalia chebula*), *Lodhra* (*Symplocos racemosa*), *Tamra* (Copper), *Mukta* (Pearl) and *Pravala* (Coral).^[10]

- **Abhyanga^[9]** (Unguent): Medicated ghee prepared with roots of *Katabhi* (*Careya arborea*), *Tagara* (*Valeriana wallichii*), *Devadaru* (*Cedrus deodara*), *Brihati* (*Solanum indicum*) and *Chandana* (*Santalum album*)^[10]

- **Panam^[9]** (Potions): *Sarpakshi* (*Xanthium strumarium*), *Chandana* (*Santalum album*), *Gandhanakuli* (*Acampe praemorsa*), *Ela* (*Elletaria cardamomum* + *Amomum subulatum*) is made into paste with Goats Urine is used for internal drink and external application.^[10]

- **Dhupanam^[9]** (Fumigation) : Fumigation is done by antipoisnous drugs.^[11]

- **Gandusha^[9]** (Gargling): Gargling is done by antipoisnous drugs.^[11]

- **Vamana (Emesis)^[9]**: The poison should be removed by administrating *Vamana* using *Koshataki* (*Luffa acutangula*), *Lodhra* (*Symplocos racemosa*), *Indrayava* (*Hollarrhena pubescens*), *Saindhava* (Sea salt), *Patola patra* (*Trichosanthes dioica*), *Maricha* (*Piper nigrum*) and *Priyangu* (*Callicarpa macrophylla*).^[10]

- **Virechana (Purgation)^[9]**: Purgation can also be done by *Triphala* (*Emblica officinalis* + *Terminalia bellerica* + *Terminalia chebula*), *Trivrut* (*Operculina turpethum*) and *Saindhava* (Sea salt).^[10]

- **Raktamokshana^[9](Blood-letting)**: It is very beneficial method. Blood should be taken out from other parts of the body by cutting the vein. After blood letting it is beneficial to pour cold ghee, milk etc. on the body.^[10]

DISCUSSION

Acharya's have described the severity of prognosis for spider envenomation on the basis of *Dosha* Vitation, that the poison which vitiates more number of *doshas* the prognosis is bad. Acharya Vaghbata had described the stages of Spider envenomation in human beings which denotes the severity of poisoning increases with days and also gives a rough idea of the severity of poison on a particular day. Acharya's have mentioned the treatment protocols to reduce the *dosha* aggravation thus resulting in better prognosis. *Nasya* and *Abhyanga* are done to decrease *Vata* aggravation. *Panam*, *Gandusha*, *Virechana* and *Raktamokshana* is done to decrease *Pitta* aggravation. *Anjana* and *Vamana karma* is done to decrease *Kapha* aggravation. The treatment modalities also give flexible protocols as per *dosha* predominance. Thus by using all methods described in samhitas one should get a better treatment for spider poison.

CONCLUSION

By studying above it seems that spider, scorpion, mosquitoes, flies, fleas, ants, lizards etc are included under *Keetas*. Their poisons cause more severe manifestations in man. The treatment is also more important. Besides this, several creature seen in our surroundings, called *luta*, cause certain poisonous illness to man. Their number and name not fully identified. *Susrutha* described 16 types of *lutas* which are not possible to identify presently. They are seen from the place where decaying substances and creatures are seen. *Agada Tantra* has simplified approach towards *Luta*'s (spiders) and has included the classification, clinical features (general and specific) and its treatment (general and specific) protocol.

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