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## Review Article

### REVIEW ON TRADITIONAL MANAGEMENT OF VIPER BITE CASES

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#### ABSTRACT

India is having highest snake bite mortality in the world. According to WHO estimates, place the number of bites to be 83,000 per annum with 11,000 deaths. Most of the fatalities are due to the victim not reaching the hospital in time where definite treatment can be administered. Ayurvedic treatments plays a major role in treating these bite cases from years back and these treatment modalities are still having great effect in reducing the death rate due to poisonous bite cases. Kerala is a state with a vast traditional knowledge of Ayurveda and has developed its own identity in the respective field. There were many traditional visha vaidyas in Kerala who handled every poisonous bite cases and given best results. Some part of this knowledge has been written down and made in the form of visha chikitsa books which are useful for current generation to get knowledge of these treatment modalities. This article gives an idea about the traditional management of viper bite cases as mentioned in vishavaidya jyotsnika and vishavaidya sara samuchaya, the two important visha chikitsa books in Kerala.

**Keywords:** viper bite, keralceeya visha chikitsa, vishavaidya jyotsnika, vishavaidya sara samuchaya

#### INTRODUCTION

Snake bite cases are common in a country like India which is densely populated and people work more in fields and near forest area. Due to deforestation and industrialization snakes have also lost their place to live and have started to dwell in cities also. These reasons have contributed to the increase in the snake bite cases in country India stands first in the world with 83,000 snake bite cases and 11,000 deaths per year as per the records of WHO<sup>1</sup>. Most of the snake bite cases are nonpoisonous and requires no major treatment and rest which are poisonous have to be treated with emergency effect to avoid fatalities. But more number of deaths occurs due to poor transportation facilities and unavailability of ASV which is used as primary care in any poisonous snake bite cases in the country. Ayurveda deals with every aspect of snakes and their treatment in detail. Kerala is a state with wide traditional knowledge in Ayurveda and especially in visha chikitsa (treatment of poisonous condition). There are many parampariya visha chikitsa viadyas in Kerala who developed their own methods for treating snake bite which include both mantra chikitsa and also oushadha chikitsa. For many years, these knowledges were kept hidden within their families and was not available for others. But recently some of the visha vaidyas documented their knowledge in the form of books which made it accessible to everyone. Some of the traditional visha chikitsa books of kerela are visha jyotsnika, visha vaidya sara samuchaya, kriya koududi, prayoga samuchaya, visha naraayaneeyam etc. Most of these books are in regional language i.e. in Malayalam. Viper bite cases are more common in kerala which made vaidyas to concentrate on its treatment aspects in detail. A detailed description about

viperidae family its features along with signs and symptoms of bite and treatments are well explained in those books.

Mandala sarpa types: There are 16 types of mandala sarpa mentioned in vishavaidya jyotsnika they are: 1.sweta 2.kushta 3.kutila 4.mahan 5.bhuhya 6.bhrama 7.theekshna 8.krishna 9.pisacha 10.hema 11.visarpa 12.peatanethraghya 13.naga 14.kumbha 15.sonitha 16.sopha<sup>2</sup>.

Vishahari leha (linctus preparation): This is a very special preparation mentioned in visha vaidya sara samuchayan, prayoga samuchayam and kriya kaumudi to identify the snake bite. By administering this leha (linctus) one can find out which snake bite has occurred by observing the taste appearing in mouth.

Preparation: 1 kudava (300ml) of mridangaphala (*Luffa amara*) paste is mixed with 2 prastha (2.5l) of nagavalli swarasa (*Piper betle*) and suspended in a cloth. The filtrate dripping is collected in a wide mouthed bronze vessel. Equal quantity of nimba taila (*Azadiracta indica*) is added to that. Purified mercury and sulphur is added 1/5<sup>th</sup> part of this mixture and mixed well with hand till no water content remains. This should be preserved in airtight containers.

How to administer: when a bite case comes, immediately 1 paanathookkam (2.5gms approx.) of leha have to be smeared in a betel leaf and the victim is made to chew and experience the taste in mouth. Normal taste of vishahari leha is tikta rasa (bitter). If the victim perceives the following taste one can infer the bite as follows:

Kashya rasa (astringent)- mild envenomation  
 Katu rasa(pungent)-darveekara bite(cobra)  
 Amla rasa(sour)-mandali bite(viper)  
 Madhura rasa(sweet)-rajila bite(krait)<sup>3</sup>

**Table 1: Mandasli sarpa dams lakshana<sup>3</sup>**

Vega lakshana (Symptoms)	Chikitsa
Yellowish discoloration of body and burning sensation (rasa dathu)	Jaladhaara followed by administration of kalka of Chandana ( <i>Santalum album</i> ) and hribera with water
Shivering and pallor (rakta dathu)	Siravyadha (venesection), lepana (topical application) and pana (drinks) of ushira and chandana
Sleepiness and severe thirst (mamsa dathu)	Yastimadu, ushira and chandana lepa applied over body
Loss of speech, pricking pain all over body, oedema and fever (meda dathu)	Triphala without seeds triturated with water given as paana
Blindness, burning sensation, delirium (asthi dathu)	Rakta removed by siravyadha and chandana given for paana
Weakness of body and nasal obstruction (majja dathu)	Root of punarnava ( <i>Boerhavia diffusa</i> ) triturated with warm water administered
Weakening of all senses and may even cause death (sukra dathu)	Ruksha nasya and ruksha anjana done

Treatment of viper bite

Paanalepaadi yoga (drinks and topical application):

1. Chandana (*Santalum album*) with cold water is administered orally.
2. Root of sarpagandha (*Rauwolfia serpentina*), root of vacha (*Acorus calamus*) and chandana is made into paste and administered orally.
3. Root of neeli (*Indigofera tinctoria*) made into paste with warm water and used orally and topical application in bite site
4. Root of punarnava (*Boerhavia diffusa*) and arka (*Calotropis procera*) used internally as well as topical application in bite site.
5. Root of karaskara (*Strychnos nux-vomica*) is made into paste and applied on site of bite.
6. Equal quantity of saindhava (rock salt), shunti (*Zingiber officinale*) and pippali (*Piper longum*) are powdered and added into equal quantity of freshly extracted butter, curd and honey taken together and is used for drinking and application.

Nasya yogas (nasal drops)

1. Saindhava with vyosha (shunti- *Zingiber officinale*, pippali-*Piper longum*, maricha-*Piper nigrum*).
2. Vacha (*Acorus calamus*) and maricha mixed in swarasa of dronapushpi (*Leucas aspera*).
3. Saindhava and maricha mixed with swarasa of black variety of surasa (*Ocimum sanctum*) and sigru (*Moringa oleifera*).

Anjana yogas (collyrium)

1. Root of sireesha (*Albizia marginata*) and maricha made paste in swarasa of thamboola patra (*Piper betel*).
2. Kalka of old maricha
3. Kalka of vyosha

Treatment for complications

Treatment for edema

1. Leaves of dathura (*Datura alba*) and chinch (*Tamarindus indicus*) taken in equal quantity pasted and mixed with equal amount of buffalo dung is applied externally.
2. Kalka of punarnava root (*Boerhavia diffusa*), sigru (*Moringa oleifera*), sireesha (*Albizia marginata*) and aswagandha (*Withania somnifera*) applied as lepa.
3. Equal quantity of kusta (*Saussurea lappa*), tagara (*Valeriana wallichii*), useera (*Veteveria zizanoidea*), chandana (*Santalum album*), yastimadhu (*Glycyrrhiza glabra*), sariva (*Hemidesmus indicus*) paste.
4. Trivrit is given bhavana with triphala kashaya for 3 days, this mixed with ghee given orally.

Treatment for yellowish urine: Bark of karanja pasted and mixed in warm water and administered orally.

Treatment for fever: Bark of chinch pasted mixed with milk and administered.

Treatment for hotness of body: Kalka of usheera, hreebera and chandana applied all over body.

Treatment for hemetemesis: Leaves of nimba pasted and mixed with milk and consumed orally.

Treatment for thirst and burning sensation: Swarasa of root of banana plant mixed with milk and taken internally.

Treatment for vomiting: Kalka of triphala given with proper anupana.

Treatment for hiccup: Shunti, maricha, pippali and draksha pasted with swarasa of dadima phala.

Treatment for stertorrhea

1. Kalka of kadamba bark administered.
2. Kutajamoolatwak triturated and mixed with the decoction of same or with hot water administered to patient.

Treatment for headache

1. Root of kaakatikthaka is pasted mixed with milk and taken orally.
2. Equal quantity of amalaki choorna and musta are boiled until milk evaporates. Then pasted along with some chandana and applied over forehead.

Treatment for anxiety

1. Useera and chandana administered orally.
2. Karpasamoola, maricha, haridra, daruharidra, usheera moola and stem, sarjikshara, kushta powdered and administered with water.

Treatment for obstruction to passage of urine and feces

1. Equal amount of seeds ela and pippali powdered and administered with hot water or tender coconut water.
2. Same above drugs dhaara over abdomen also done.
3. Aragvadhya with hareethaki, honey and ghee is given orally.
4. Trivrit with hareethaki, honey and ghee is given orally.
5. Pippali with hareethaki, honey and ghee is given orally.
6. Kalka of root of nirgundi application over bladder.

Preparations: - Nalpamaradi lepa: Used as lepa for reducing swelling, burning sensation and all problems due to vrana.

Ekanayakamooladi lepa and ghritha: Used as lepa over vrana.

Karaskaravandakadi lepa: Used as external application for vrana. It's effective in reducing vitiated rakta dosha and reduces foul smell, also used for reducing oozing and itching. Bhrahmirasadi tailam, njetanjatadi tailam, paranthyadi tailam: Used for doing dhara over vrana.

#### Treatment in Ashtanga Hridaya

Equal part each of mrdika (*Vitis vinifera*), gaja dhantika and half part of leaves of surasa (*Ocimum sanctum*), bilva, (*Aegle marmelos*), dadima (*Punica granatum*) mixed with honey is an agada especially for viper bite. The person bitten by mandali snake should drink the decoction of manjishta (*Rubia cordifolia*), madhuka (*Glycyrrhiza glabra*)<sup>4</sup>.

#### Treatment in Sushruta samhita

In the case of mandali visha the first phase should be managed like in darvikara, in the second phase anti poisonous recipe should be given to drink with honey and ghee, then the patient should be vomited and there after served with gruel, in the third phase after evacuating the patient with drastic purgative, he should be given wholesome gruel, in the fourth as well as fifth phase managed as in darvikara, in the sixth phase kakolyadi group and sweet anti poisonous recipe is useful and in the seventh phase anti poisonous formulation should be used as pressed snuff<sup>5</sup>.

#### Treatment in Charaka samhita

The patient should be treated with effusion which is very cold and which is stambhana (arresting the movement of fluids in the body) and the application of cold ointment<sup>6</sup>.

### DISCUSSION

Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide which represent 5,400,000 bites over 2,500,000 fatalities followed by about 125,000 deaths<sup>7</sup>. The knowledge about snakes their types, how to identify them and their bite management is mentioned in detail in traditional ayurvedic text books. There were many parampariya vaidyas in kerala who practiced only visha chikitsa and have given good results in reducing the mortality rate. These methods of treatments were followed in particular areas according to the availability of drugs and also the nature of bite cases coming around those areas. Many treatment modalities for the diagnosis of poisonous bite as well as its emergency

management are mentioned along with the remedies for complications are mentioned.

### CONCLUSION

snake bite cases are common in India and requires at most care to avoid complications and fatalities. The traditional vaidyas who developed their own way of treatment methods were totally depended on their practical experience which makes these traditional books more logical and can be made use in present era also. Those visha chikitsa books are having not only containing snake bite managements but also mentions about all poisonous bite case managements.

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