

A COMPREHENSIVE REVIEW ON DARVEEKARA SARPA

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ABSTRACT

Agadatantra is one among the eight branches of Ayurveda which deals with the diagnosis and treatment of poisons. There are about 2500 species of snakes in this world and in India, there are about 250 species, out of which about 50 species are poisonous. Depending on the mythological habitat, the ancient authors have classified snakes in several ways. They are mainly divided into two groups namely “*Divya Sarpa*” (Mythical snakes) and “*Bhauma Sarpa* (Earthly snakes)”. *Ananta, Takshaka, Vaasuki, Gulika, Karkotaka, Shamkhapaala, Padama* and *Mahaapadama* are the eight *Divya Sarpas*. *Bhauma Sarpas* are again sub classified into five types namely *Darveekara, Mandali, Rajimanta, Nirvisha* and *Vaikaranja*. Snake bites are well known medical emergencies in many parts of the world especially in rural areas. It is common occupational hazards mainly in farmers, plantation workers, herders and laborers which lead to significant morbidity and mortality that remains largely unreported. This article is about *Sarpa*, its classification, salient features, reproduction, management of snake bite especially *Darveekara sarpa visha* (Cobra Poisoning).

KEYWORDS: *Sarpa* (Snake), *Darveekara sarpa* (Cobra), *Sarpa damsa* (Snake bite), *Sarpa visha* (Snake Poison).

INTRODUCTION

Ayurveda one of the oldest medical systems in the world has mentioned *Agada Tantra* as one among its eight branches which deals with snakes, its classification, salient features, diagnosis and treatment of snake poisons¹. It is given highest importance among the branches of medicine owing to its need for emergency management. Snake is an elongated reptile of the sub order serpents². According to mythology, snake is said to be first reptile on the planet Earth. *Visha* may be any substance that interferes with the normal physiology of the body resulting in *Vishada* or sorrows³. *Visha* is mainly divided into 2 types namely

Sthavara Visha (poison of plant origin) and *Jangama Visha* (poison of animal origin)⁴.

Under different categories of *visha, sarpa visha* or snake poison is very important as it causes unnatural death⁵. *Sarpa visha* comes under *Jangama visha varga* and is also known as *pranija visha* or animal poison⁶. Under *Jangama visha* come organisms like *sarpa* (snake), *mooshika* (Rats), *lootha* (spider), *vrischika* (scorpion), *keeta* (insects) etc⁷. When *nakha* (nails), *danta* (teeth), *mala* (faeces), *mootra* (urine) etc of these animals comes in contact with human body, the body becomes poisonous and results in various complications including death.

There are about 3500 species of snakes spread across every continent of tropical and temperature climates except Ireland, New Zealand and Antarctica. They range in size from tiny 10cm long thread snake to pythons and anacondas of over 17 feet long⁸. Of the 3500 species recognized so far, 4/5th of the varieties are non poisonous and rest of them possess potent venom and they comprise minority of the species. In India, snake bites take a heavy toll of human lives and are reported to have the highest of snake bites (81000) and death (11000) per year⁹. Estimates of snake bite mortality in India vary from approximately 1300 to 50000 annually. About 216 species of snakes are found in our country and only 52 of them are said to be poisonous¹⁰.

In the context of *Jangham visha*, Acharyas has mentioned different snakes like *Darveekara*, *Mandali*, *Rajimanta* and *Vaikaranja* all of which are *Bhauma Sarpa* (snakes present on earth).

TABLE NO: 01. CLASSIFICATION OF SARPA

Snakes	Caste	Age	Status of female
<i>Darveekara</i>	<i>Brahman</i>	<i>Bala</i>	<i>Garbhini</i>
<i>Mandali</i>	<i>Kshatriya</i>	<i>Kshatriya</i>	<i>Soota</i>
<i>Rajimanta</i>	<i>Vaisya</i>		
<i>Vaikaranja</i>	<i>Shudra</i>		
<i>Nirvisha</i>			

1. *Darveekara Sarpa* – The snake having hood mark with spots resembling a wheel, plough umbrella or a *swastika* symbol on their heads and are extremely swift are known as *darveekara sarpa*. *Darveekara sarpa* can be interpreted with the common cobra (*Najanaja*) and king cobra (*Najabungarus*). These snakes vitiate *Vata Dosh*.

CLASSIFICATION OF SARPA

***Divya Bhauma vibhagena dwividha pannaga smrita* (A.S.U.41/2)¹¹**

In the basic classification snakes are two types

1. ***Divya (Mythical)***: They are *Vaasuki*, *Takshaka*, *Sagara*, *Nanda* and *Upananda*. They are all poisonous and the venom is situated in their eyes and breath. These *Sarpas* were worshipped at several occasions like *Naga panchami* to escape from their poison.

2. ***Bhauma (Living on earth)***: Totally eighty numbers of snakes are described in this group. They are again sub classified into *savisha sarpa* (poisonous snakes) and *nirvisha sarpa* (non poisonous snakes).

Savisha sarpa (poisonous snakes) includes mainly 4 types of snakes. viz *Darveekara* – 26, *Mandali* – 22, *Rajimaan* – 10, *Vaikaranj* – 3. *Nirvisha sarpa* (non poisonous snakes) are 12 in number.

2. *Mandali Sarpa* - The snake coining under *mandali* family are large and slow, marked with ring like or spot on their skin and have the glow of the sun or fire. It can be interpreted with vipers. These snakes vitiate *Pitta Dosh*.

3. *Rajimanta Sarpa* – Those which are glossy and which bodies are painted with lateral, horizontal and perpendicular strips are known as *rajimanta*. It can be

interpreted with common *krait*. These snakes vitiate *Kapha Dosh*.

4. **Vaikaranja** – They are formed by the union of above three varieties vitiating dual *doshas*.

TYPES OF DARVEEKARA SARPA

There are mainly 26 types of *darveekara Sarpa* whose names are as follows. (Su.K. 4/34)¹²

TABLE NO: 02- TYPES OF DARVEEKARA SARPA

Name of the Sarpa	Name of the Sarpa
1. Krishna sarpa	14. Padhya
2. Mahakrishn	15. Mahapadya
3. Krishnodar	16. Darbhpushp
4. Shwetkapot	17. Dadhimukh
5. Mahakapot	18. Tundrik
6. Balahak	19. Bhrakutimukh
7. Mahasarpa	20. Vishkir
8. Shankhkapal	21. Pushpabhikirn
9. Lohitaksh	22. Girisarpa
10. Gavedhuk	23. Rijusarpa
11. Parisarpa	24. Swetodar
12. Khandfan	25. Mahashira
13. Kakud	26. Algard, Ashivish

PHYSICAL APPEARANCE OF DARVEEKARA SARPA

sthanglanglacchtrastikaankushdharine gyeya darveekara sarpa fanineh shigra gaamina. (Su.K.4/22)

Moves very fast, bears the marks of plough, wheel, umbrella or swastika on their hood, they vitiate *vata*, moves in the day, and poisonous effect is more in young.

LIFE SPAN

Approximately all snakes have an average life of 120 years.

SEX DIFFERENCES OF SNAKES

Snakes are again classified as male, female and bi-sexual. The eyes, tongue, mouth and the head of the male serpents are large, while

those of female snakes are comparatively small. Those which have both these features, are mild venomous and not easily irritable should be considered as bisexual.

AGGRAVATING FACTORS

darveekarastu tarun..

Darveekara sarpa are fatal in young stage of life.

kopyantinilah janto faninah sarv evatu

All hooded (*Darveekara*) snakes aggravates *Vata Dosh*.

GENERAL SYMPTOMS OF DARVEEKARA SARPA VISHA-

(Su.K.4/37)¹³

The main symptoms of *darveekara sarpa dams* are as follows-

TABLE NO: 03

Blackness in skin	Hiccough	upward movement of <i>vayu</i>
Eyes	Roughness	thirst
Nails	pain in joints	salivation
Teeth	weakness in waist	obstruction in channels
Face	Dryness	different <i>vatika</i> pain



Pic 1. DARVEEKARA SARPA DAMSA DARVEEKARA SARPA DAMSA LAKSHANA ACCORDING TO VEGA- (Su.K.4/39)¹⁴

1. First Vega- in the first Vega the poison vitiates the blood due to which it becomes black, it gives rise to blackness and feeling as if ants are crawling on the body.
2. Second Vega- in second vega it vitiates the muscles which gives rise to marked blackness, inflammation and cysts in the body.
3. Third Vega- in the third vega, it vitiates the fat which causes moistening of the site of

TABLE NO: 04.

DARVEEKARA SARPA DAMSA LAKSHANA ACCORDING TO VEGA

VEGA	DUSHTI	SYMPTOMS
<i>Prathama</i>	<i>Rakta</i>	<i>Paridaha</i> (Infects blood and manifests Burning sensation), (Black discoloration)
<i>Dwitiya</i>	<i>Mamsa</i>	(Black discoloration of body parts)
<i>Tritiya</i>	<i>Medo</i>	(Heaviness of head)
<i>Chaturtha</i>	<i>Pravesha</i> <i>Kostha</i>	Drowsiness Salivation Looseness of joint
<i>Panchama</i>	<i>Bones/asthi</i>	Vitiate <i>prana</i> and <i>agni</i> Generalized pain, burning sensation, hiccough
<i>Shashtha</i>	<i>Majja</i>	
<i>Saptama</i>	<i>Shukra & Vyana</i>	Pain in flanks and lumbar, Arrests all functions Increased perspiration, Respiratory arrest



Pic 2. DARVEEKARA SARPA DAMSA

bite, heaviness of the head and stiffness of eyes.

4. Fourth Vega- in the fourth vega the poison enters into thoraco-abdominal cavity and vitiates doshas predominantly kapha which produces drowsiness, salivation and looseness in joints.
5. Fifth Vega- In the fifth vega it penetrates into bones and vitiates prana and agni which leads to pain in joints, hiccough and burning sensation.

TREATMENT CAN BE VIEWED THROUGH

In cases of snake poisoning, emergency treatment is required as the poison remains only for a period of 100 *matra* at the site of the bite and then spreads throughout the body vitiating the blood and other tissues. So within this period itself, incising the site of bite and other treatments should be done quickly so that the poison does not spread all over the body.

TABLE NO: 05

GENERAL TREATMENT CHATURVIMSHATI UPAKRAMAS- (Ch.Chi.23/35-37)¹⁵

Acharya Charaka emphasized not to follow all of these *upakramas* in all cases of poisonings.

A wise physician has to examine and decide justifiable procedures for the specific condition.

‘CHATURVIMSHATI UPAKRAMAS’

SL.NO.	TREATMENT MEASURE	PROBABLE COMPARISON
1	<i>Mantram</i>	Chanting of Mantras
2	<i>Arishta bandanam</i>	Application of Tourniquet
3	<i>Utkartanam</i>	Incision over the bite excluding vital points
4	<i>Nishpeedanam</i>	Compression
5	<i>Achushanam</i>	Sucking through the site
6	<i>Agni</i>	Thermal cauterisation
7	<i>Parishekam</i>	Sprinkling water
8	<i>Avagaham</i>	Water bath
9	<i>Rakta mokshana</i>	Blood letting
10	<i>Vamanam</i>	Emesis
11	<i>Virekam</i>	Purgation
12	<i>Upadhanam</i>	Medication on incised scalp
13	<i>Hrudayavaranam</i>	Protection of heart
14	<i>Anjanam</i>	Medicated collyrium
15	<i>Nasyam</i>	Medicated nasal insufflations
16	<i>Dhumam</i>	Medicated smoking
17	<i>Leham</i>	Medicated linctuses
18	<i>Aushadham</i>	Anti-poisonous drugs
19	<i>Pradhamanam</i>	Medicated snuffing
20	<i>Pratisaranam</i>	Local applications
21	<i>Prativisham</i>	Specific antidotes
22	<i>Sajna Samstapanam</i>	Resuscitation
23	<i>Lepam</i>	Application of Medicated pastes
24	<i>Mruta Sanjeevanam</i>	Revivation

TABLE NO: 05

MAIN USES OF UPAKRAMAS

In restricting the entry of the poison into the systemic circulation	<i>Arista Bandhana, Utkartana, Chushana etc</i>
To eliminate the poison form body	<i>Rakta Mokshana, Vamana, Virechana etc</i>
To counteract the poisons (Anti-dote activity)	<i>Leha, Aushadha, Prativisha etc</i>
As supportive / symptomatic measures	<i>Sanjnasthapana, Mrita sanjivana etc</i>
As topical applications	<i>Anjana, Pratisarana etc</i>

TABLE NO: 06 VEGANUSARA VISHA CHIKITSA (TREATMENT OF DARVEEKARA SARPA DAMSA ACCORDING TO VEGA)¹⁶

VEGA	DUSHTI	CHIKITSA
<i>Prathama</i>	<i>Raka Dushti</i>	<i>Raktamokshana by sira vedhana</i>
<i>Dwitiya</i>	<i>Mamsa Dushti</i>	<i>Madhu, Ghrita and Yavagu Pana</i>
<i>Tritiya</i>	<i>Medo Dushti</i>	<i>Anjana, Nasya</i>
<i>Chaturtha</i>	<i>Koshta Pravesha</i>	<i>Vamana, Yavagu Pana</i>
<i>Panchama</i>	<i>Asthi pravesha</i>	<i>Sheetalopachara, Virechana, and Yavagu Pana</i>
<i>Shashtha</i>	<i>Majja Dushti</i>	<i>Sheetalopachara Virechana and Yavagu Pana</i>
<i>Saptama</i>	<i>Shukra and Vyana Dushti</i>	<i>Tikshna anjana, nasya, kakpada shaped incision on the scalp and application of blood mixed flesh over the incision</i>

DARVEEKARA SARPA DAMSA VISHESHA CHIKITSA YOGAS¹⁷ - (As.H.U.36/57)

1. Root of *sindubaraka* macerated in its own juice added with *madhu* for *paana*.
2. Root of *sindubaraka* and *swetha girikarnika* made into paste with water and consumed.
3. The juice of *kushtha* with *madhu* for *nasya karma*.
4. In the case of black cobra bite, bloodletting is done and paste of *charti* and *nakuli* is applied.
5. Drink prepared out of *ghee*, *honey*, *manjishta*, and *griha-dhuma*.

LEPAN YOGA

1. External application of *hingu*, *maricha*, and *vacha* ground in the juice of *kimsuka*

bark on the bite mark subsides *darvikara visha*.

2. *Lepana* with *tankana* and *grihadhooma* mixed in urine.

3. *Lepana* with paste of *lasuna*, *maricha*, *ardraka* and *pippali* mixed in the juice of *arkapatra*.

PAAN YOGA

1. Internal administration of *vyosha(trikatu)* with equal amount of *pippali*, *maricha* and *sringavera* with *kanji* or water nullifies all *visha*.

2. Intake of paste of *Ashwagandha* with pure water.

3. Mixed paste of *guduchi* and *kola* (piper cubeba).

4. Oral administration of *shirisha* flower, seed of *arka* and equal amount of *vyosha* in *arka kshira*.

NASYA PRAYOGA

1. *Saindhava* ground in the juice of *tambula patra* and *dhatuira patra* is used as *nasya* in unconscious poisoned person.

2. *Nasya* with *swarasa* of *tulsi* & *dronapushpi* with *maricha*.

3. *Nasya* with *hingu maricha* & *saindha* in human urine or *tulasi swarasa*.

MAHAGADA

1. *Trivrt*, *visalya*, *madhuka*, *haridra*, *daruharidra*, *rakta manjistha*, *aragvadha* and the group of salts and *trikatu*-these should be powdered finely, mixed with honey and preserved in a horn.

2. This anti-poisonous formulation destroys poison used as intake.

3. This is known as *Mahagada* as it has great power.

AJEETAGADA

It is prepared by grinding the fine powder of *vidanga*, *patha*, *triphala*, *ajamoda*, *hingu*, *tagara*, *trikatu*, *chitraka* and *pancha lavana* with honey into a fine paste and kept covering with the lid of same material.

DISCUSSION

Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide. The knowledge about snakes, their types, different ways to identifying them and their bite management is mentioned in detail in traditional *Ayurvedic* text books. There were many traditional physicians named *Visha Vaidyas* in Kerala who practiced only *Visha Chikitsa* (management of poisoning) and have given good results in reducing the mortality rate. Immobilising and transporting snakebite victims to the hospital and prompt

administration of anti-snake venom remain the best way to reduce morbidity and mortality. It is also important to practise correct first aid measures, as otherwise they may cause more harm than good. There are many classifications found in the classics based on the different characteristics but their practically applicability in observing the symptoms and treating accordingly is difficult in the present era. So more and more seminars, CME should be conducted regarding identification of poisonous snakes as well as its line of treatment. Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide Snakes are the most feared venomous animals in the world due to their induced morbidity and mortality worldwide

CONCLUSION

Treatment modalities have their own significance in neutralizing the poison in different ways. *Chaturvimshati Upakramas* can be used judiciously even in case of *Darveekara Visha*. Application of Tourniquet also has certain limitations in

case of *Darveekara Visha* (Cobra poisoning) considering the danger of increasing the local effects of the necrotic venom. No evidences are available regarding the clinical efficacy or anti-venom activity of the formulations mentioned for the treatment of *Darveekara Visha*. Though there is certain ambiguity in the approach as compared to modern medical science, the treatment modalities emphasized in *Ayurveda* have a great significance and are valuable particularly in remote areas, where medical facilities are meager.

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