

MANAGEMENT OF SNAKE BITE – AS PER AYURVEDA**Dr. Kacharu Dadarao Solanke***

Assistant Professor, Department of Agad Tantra Evum Vidhi Vaidyaka, Rjs Ayurved Medical College, Kopergaon Maharashtra.

***Corresponding Author: Dr. Kacharu Dadarao Solanke**

Assistant Professor, Department of Agad Tantra Evum Vidhi Vaidyaka, Rjs Ayurved Medical College, Kopergaon Maharashtra.

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ABSTRACT

Snakebite is a major problem worldwide, and a common medical emergency. Snake bite remains an underestimated cause of accidental death in India. Snake bite is a significant health concern, especially in rural populations of tropical and subtropical countries. Ayurveda has its own unique way of approach towards the management of visha, and is discussed with the concepts of current science. India is reported to have the highest number of snake bites (81,000) and deaths (11,000) per year. Considering this, World Health Organization added snake bite to their list of neglected hot diseases and designed an exclusive protocol for its management. High mortality is due to poor health services in rural areas and delay in getting the victim to a well-equipped health care facility, where anti snake venom can be administered. Ayurveda has various treatment modalities and herbs those were mentioned for venomous bite treatment. There are many treatment modalities available for snake bites, among them Chaturvimsati Vishachikitsopakrama are Ayurveda treatment modality mentioned in Charaka Samhita. The concept and procedures of few Upakramashas also been clearly defined in other Samhitas like Sushruta, Astangasangraha, Astangahrdaya. Acharya Charaka has given 24 Upakramas to counter the cases of poisoning, including Mantras.

KEYWORDS: Snakebite, snake bite, Ayurvedic Management.**INTRODUCTION**

Ayurveda has Eight Aanga, among them Agad Tantra is one. Agad Tantra deals with the detailed study about poisonous sign and symptoms that produced by the bite of snake, insects, scorpions, rat etc., identification, detection and the management of natural, artificial and combined poison. Snake bite is a well-known occupational hazard amongst farmers, plantation workers, and other outdoor workers and results in much morbidity and mortality throughout the world. India is such a country, where snake bite is very common emergency. There are nearly 3150 species of snakes in the world and around 600 species are venomous. In India, out of the 216 species of snakes, 60 are considered poisonous. It is documented that there are 54, 00,000 snake bites with 2,50,000 envenomation and around 1,25,000 fatalities annually in the world. India is reported to have the highest number of snake bites (81,000) and deaths (11,000) per year. Snake envenomation can be broadly divided into haemotoxic, cytotoxic and neurotoxic variety. Anti-snake venom (ASV) for the treatment of snakebite. Ayurveda has mentioned Caturvimsanti Vishachikitsopakrama for the treatment of insect bites including the snake. Those Upakrama have been used from thousands of years ago. Without

any complications, we can perform everywhere even in the lack of advanced instruments.

MATERIALS AND METHODS

The keywords that have been searched are snake, snake bite, Ayurvedic Management. These have been searched from literary of classical text books like Charaka Samhita, Sushruta Samhita, Astanga Hridaya, etc. and also search from responsive commentators, Multiple database (PubMed, Google scholar, research gate, AyushDhara).

Types of Snakes**According to Ayurveda**

In Astangasangraha of Vagbhat, snake has been classified into two groups i.e., Divya and Bhaum, Vasuki, Takshak etc. are the example of Divya snake. Sushruta has further sub classified Bhaum Snakes into five groups they are: Darvikar, Mandali, Rajiman, Nirvisha and Vaikaranja. Sushrutaacharya described four types of snake bites as.

Sarpita - Inflamed deep wound, blackish in color.

• Radita - Superficial wound, red or bluish in color. This bite is considered as less poisonous.

- Nirvisha - Non-poisonous bite. May be a dry bite. Signs of inflammation cannot be observed.
- Sarpangabhithata - Actual bite will not take place in this type.

According to Modern

Most of the snakes have been classified into two main groups:

- (A) Venomous
- (B) Non-venomous

Poisonous snake has been further classified into three types.

Causes for Snakebite

Acharyashaveexplained8reasonsforSarpaDamsha. They are Bhaya, Krodha, Aaharatha, Padasparsha, Ativishat, Vairadhya, Papakarma, Deva-rishi-yamakopa.

Symptoms of snake bite

Accidental contact with snake will lead to the manifestation of symptoms like local inflammation (daah) etc. This kind of manifestation has been explained by Charaka as 'Shankavisha' (suspicious poisoning), causes fever, vomiting, fainting and even feeling of burning sensation or exhaustion, delusion and diarrhea, manifests because of fearful complex.

Management of Snake Bite

Mantra

Chakrapani prefers Mantra as foremost and par excellence upakrama among others, which nullifies the poison without fail. Charaka further said that, Mantra occludes the blood vessels, prevents the entry of poison in to the systemic circulation and protects from further infections. Chanting of Mantras is a specific rhythm which is supposed to build confidence in victim and help in relieving anxiety. They may stimulate sympathetic nervous system and strengthen the peripheral blood vessels, which helps in maintaining the normal blood flow to the vital organs. Thus Mantra may have a vital role in reassuring the victim.

Arishta-Bandhana

All the proper measures should be taken within 100 Matrakala, because venom will be stay at bite site till that time, then it will spread to the whole body through circulation.^[18] Before spreading of poison, Venika (Rope or tourniquet like) should be applied just above the bite site, and then forcefully squeezed to bite site. Aristabandhan is more effective when applied with chantin Philip E. Snakebite and scorpion sting. In: Srivatava RN editor. Pediatric and Neonatal Emergency Care. Jaypee Brothers; New Delhi, p. 227-34. but ligation should be neither too tight nor too loose because complications like swelling, necrosis will be seen, when ligation is too tight. The speed of flow of venom will stop like dam(Bandh) obstructs the flow of water. Sushruta emphasized to apply it about four inch above the bite site, made from either bark of plant or anything soft things. In contemporary science, ligation is

prohibited but some study shows best intervention method to prevent from spreading of venom, into the systemic circulation by constricting the lymphatic vessels, blood vessels where they used Tourniquet or any pressure immobilization bandage as ligation.

Agni

When the bite is on a part of the body that cannot be subjected to arishta bandhana such as the trunk or face, suction, excision and burning the site are indicated by Charaka. The bite spot should be burned with red-hot gold or iron. Except in the cases of viper bite, because in this case pitta is increased and their burning is contraindicated as toxic manifestations may aggravate.

Utkartana, Nishpidana and Chushana

As the root cutting trees stops its growing up, like the same way, Doing Utkartan (incision) at bite site prevents from further spreading of venom. After incision, suggested for Achushana (sucking) of venom with proper care, which helps to flow out of venom containing blood. In Allopathic science, they avoid incision, because it can lead difficult in diagnosing the type of snake bite and also brings further complication. Similarly, Nishpidana (Squeezing) should performed from all around the bite site, that is usually applied on vital points or Joint area, where ligation cannot apply. After incision, Chushan(sucking) Karma is applied to eliminate venomous blood out, where mouth should fill with clothes or clay, ash, Agad or stool of cow or coating of mouth with oil, Ghee during Chushana Karma.

Raktamokshana and Prashamana

When the poison is spread to the entire body, bloodletting is most potent treatment. Sushruta said that, siravedha at the site of bite or bloodletting by cutting the veins at extremities and forehead is effective in removing the toxic blood from the system. After bloodletting the residual blood deranged by the heat of poison, should be suppressed or stabilized by external applications of medicinal pastes or by irrigation with water or fluids medicated with cold potency drugs.

Parisheka, and Avagaha

When Visha enters into the body then advised for Parisheka (cold therapies) around the bite site with the extraction of herbs having cooling effect till horripilation, which arrest the spreading of poison by coagulation, also alleviates from further complications like fainting, toxicity, increased heart rate etc. Sushruta has advised for the application of Lepa (paste) formed with different kinds of herbs around the bite site and Parisheka (irrigate) this site with the water mixed with Chandan and Khas. In contemporary Science, it is one of the important means that prevents from spreading of infection by the process of Washing or irrigation with clean water, isotonic solution or antiseptic agent, around the bite site. Similarly, Avagahan (sudation by sitting in tub) is the process of immersion or dipping of the affected part into the medicated decoction or lukewarm

oil. Here the bite site is dropped(sink) into the decoction made from different herbs having Vishaghna properties. From contemporary view, this process can be compared with Hot water immersion (HWI). This procedure is generally applied for marine and freshwater envenomation, that helps to inactivate the venom component in some amount. Even, it will reduce inflammation by inactivating inflammatory receptors and improve metabolic health.

Pratisaranam and Prativisham

If blood is not coming out from the bite area by incision or any procedure then it is dangerous for patient because blood being affected by poison, the constitution is deranged and thus the patient expires. So it should be impelled by application of rubbing powders such as Curcuma longa (Rajani), Rock salt (Saindhava), Piper longum (Pippalee), Piper nigrum (Maricha), dry Zinger officinale (Shunt'hee) etc. So due to application of these powder formed drugs, enhances the flow of blood or body fluids. Charaka says that animate poison is the antidote to inanimate poison and viceversa because of their reverse action so the treatment is given accordingly.

Vamana KarmaL

Sushruta mentioned seven kinds of VishaVega and advised to do Vamanakarma at the second stage of Rajiman Visha Vega followed by anti-poisonous recipes. Similarly, in fourth stage of Darvikar, Mandali and Rajiman Visha Vega advised for Vamana Karma. Again, advised to do strong Vamanakarma, when the person has bitten by snake with Kapha predominant and bitten in winter season with the features of salivation, fainting and intoxication. AcharyaVagbhat in Astanga samgraha advocated for Vamana Karma when the snake bite is above the umbilicus and through different kinds of procedures that increases and accumulates Kapha in the heart, that develops Heaviness, salivation and nausea, hence that patient should be induced vomiting by using emetic drugs.

Virechanam

The persons of pitta constitution, bitten by a snake of pitta predominant features of the bite being in parts below the umbilicus, the poison found localized in the large intestine (pakwashaya) should be made to drink a purgative drugs, Upadhana When the vitiated Kapha obstructs the channels because of the effect of venom and interferes the normal movement of Vayu, and the patient will show features of going to die like deep inhale and expire, in such case advised for Kaakpad(incision) on scalp and apply the Mamsa of goat, buffalo, hen inside the incised wound, which helps to draw the poison from Rakta. Sushruta in his Kalpasthan of fifth chapter, has indicated this procedure in seventh stage of Darvikar Visha Vega. Vagbhat also mentioned for application of pieces of fresh bloody Mamsa or skin over the incised (Kaakpad) region.

Hridayavarana

When a person has bitten by poisonous snake or any insects, at that case, primary aim is to protect heart by taking different medicines. For this purpose, honey, cow's ghee, cow's milk, Majja (bone marrow), juice of sugarcane, blood of goat etc., should give him immediately for protecting heart, that makes Avarana (covering) of heart. Poison mostly having TikshnaGuna, that weakens the heart, so in order to protect it, the patient should be made to drink pure ghee, ghee mixed with honey or antipoisonous drugs added with more ghee and then advised for Vamana Karma.

Anjanam and Dhumam

Anjanam means collyrium, should be applied in a case of poisoning that develops swelling around the eyeball, somnolence, discoloration and turbidity of the eyes and where the victim visualizes all objects as discolored. It is said that after a bite of sarpita type of snake, Anjanam is given in 3rd and 7th stage (vega) of poisoning. Smoke or fumes arising from antitoxic materials are given for predominant conditions of upper body part (urdhwajathru) vitiation due to poison.

Leham and Aushadham

When mouth becomes dry due to poison, then Linctus usually of ghee and honey is given called as leham. After that, different types of antipoisonous drugs are administered through oral cavity by incantation of mantra or without mantra and other than this all types of internal administration of medicaments such as water extract (Kashaaya), pills, nasal medication in the form of drops(Nasya), collyrium, medicated drinks comes under this jurisdiction.

Parisheka, Avagaha and Lepa

After proper elimination of poison, the incised area is to be cleaned thoroughly and medicated pastes are too applied. For these purposes, the drugs and other liquids which are sheeta(cool) in nature have been preferred. The cold character of the drug helps in further infections in wound also helps in contraction of local blood vessels, preventing further spread of remaining poison if any at the site.

Mritasanjivana

It is the one of the most special types ancient classical therapy which is used for the resuscitation of patient when showing the sign of death or is going apparently to death. Charak, in 23 chapter of Chikitsasthan advised to take powder of Palashaseed with bile of peacock in eight stages of Vega with patient appear to death. In classical text various preparations [Table 5] have been mentioned which is used for the resuscitation of patient. In allopathic science, it has been clearly defined about life saving drugs i.e., anti-snake venom and different procedures like CPR (Cardiac Pulmonary Resuscitation). It can be considered as the term Mritusanjivani.

DISCUSSION

Some snakes defined in Ayurveda lie under venomous and non-venomous. The poisonous snakes like Darvikar, Mandali, Rajimaan etc. The poisonous snakes like Darvikar, Mandali, Rajimaan etc. have more or less similar poisonous action like neurotoxic, vasculotoxic and myotoxic poison respectively. Also, many non-poisonous snakes have found, thus there is no need to be discussed about their management. Chaturvisanti Vishochikitsopakram has mentioned in classical text for the treatment of venomous envenomation. In Ancient period, various kinds of Chanting were applying for treatment of venomous conditions. In modern, study have found the significance of Mantra in venomous condition like snake bite, by inhibiting the secretion of adrenergic receptor and prevents from stimulation of nervous system. Thus, provides mental relaxation which slow down the speed of venom flow into systemic circulation. Mantras have positive phrases or words and brings the positive energy that decreases the negative thoughts or stress. Arista-bandhana is another procedure that prevents from entering of venom into systemic circulation. But contemporary science thought that it may cause necrosis of tissues and brings further complication. So, do not allow this procedure. Similarly, Utkartana is another procedure that helps to eliminate venom along with vitiated blood from the bite site.

CONCLUSION

The Upakramas have their own significance in neutralizing the poison in different ways. Though there is certain ambiguity in the approach as compared to the Modern medical science; the treatment modalities emphasized in Ayurveda have a Great significance and are valuable particularly in remote areas, where medical Facilities are inadequate.

REFERENCES

1. Shastri A. Sushruta Samhita part 1. Sutrasthan, 1/14. Varanasi: Chaukhamba Sanskrit sansthan, 2019; p. 6.
2. Aziz H, Rhee P, Pandit V, Tang A, Gries L, Joseph B. The current concepts in management of animal (dog, cat, snake, scorpion) and human bite wounds. J Trauma Acute Care Surg, 2015; 78: 641-8.
3. Ray AS. Snake Bite its First Aid & Anti Snake Venom (ASV): Details Guidelines. Pharma Tutor, 2014; 2: 85-8.
4. Sushruta, Sushrutsamhita, Ayurveda tatwasandeeepika, hindi commentary, edited by kaviraj Ambikadutt Shastri, Kalpsthana, 4/14-9, Chaukhamba Sanskrit sansthan, Varanasi, edition-II, 1997; p. 38.
5. Charaksamhita, Chikitsasthana, 23/221, Chaukhamba Surabharti Prakashan, Varanasi, Reprint, 2009.
6. Guidelines for the clinical management of snakebites in South East Asia region, WHO, South East Asia, Delhi, 2005.
7. AstangaHridaya, uttarsthana, 36/38-9, Chaukhamba Surabharti Prakashan, Reprint, 2010.
8. Astanga Sangrah, uttarsthana, 40/87, Chaukhamba Surabharti Prakashan, Reprint, 2010.
9. Philip E. Snakebite and scorpion sting. In: Srivatava RN editor. Pediatric and Neonatal Emergency Care. Jaypee Brothers; New Delhi, p. 227-34.