Oothu Chikitsa (Blowing Therapy)-A Review on Crisis Management in Snake Bites

Swathi Sharma,¹ Santosh F Patil,² Harish Babu H,³ Bramhadattan Namboodiri⁴

ABSTRACT:

Background: Snake bite management is one of the perplexing tasks in present day due to shortage of envenomation therapy. It is an emergency condition requiring quick acting remedy for different symptoms. Agada Tantra (toxicology) is one such branch of ayurveda which deals with the treatment principles of envenomation by animal or plant. Few empirical textbooks on Visha chikitsa of Kerala mention a therapeutic procedure ‘Oothu chikitsa’ (blowing therapy) to manage crisis of snake bite.

Source: Literary review from the classical text.

Indications: Classically the procedure is employed in snake bite victim presenting with diminished sensorium to both verbal and physical stimuli, by blowing a combination of drugs into the ears and over the scalp. This practice is still alive as a legacy at doorstep of traditional practitioners of Kerala.

Conclusion: Oothu chikitsa is feasible and effective in condition where patient is losing consciousness due to envenomation. These practices need to be explored and understood to improvise the management of envenomation and uphold its importance.

Key words: Visha chikitsa, Oothu chikitsa, Snake envenomation, Traditional medicine, Kerala.

INTRODUCTION

According to the World Health Organisation (WHO) about 5.4 million snake bites occur each year, resulting in 1.8 to 2.7 million cases of envenomation (poisoning from snake bites) as on May 2021. Snake bite management has been a challenge in most of the developing countries accounting to many deaths.¹²

Despite such eye-catching statistics and underrated reporting of snake bite from rural zones, snakebite remains an under estimated cause of accidental death in modern India. Most of the rural population depends on the traditional healers for such emergency condition, for which the concern is raised as delay in availing scientific
treatment. However, there are also references for use of medicinal plants in treating such cases successfully. These parallel findings have their contextual importance if seen rationally.\textsuperscript{3,4,5}

Conventional medicine vouches on Anti-venom therapy which comes with its own set of drawbacks, recent understanding of its questionable effectiveness and scarcity of it also makes the situation find an alternate medicine.\textsuperscript{6,7,8} Agada Tantra a branch of Ayurveda deals with different sources, types and modalities for the management of poisoning conditions including snake bites. It has elaborated 24 algorithmic modalities\textsuperscript{9} for treating venomous conditions. During evolution new approaches were adopted and among them Oothu Chiktha was one. This therapeutic procedure was in and now practised by Visha vaidya in Kerala. Elapsing years have made them to pen down this procedure as one among other treatments for snake bite envenomation, who should be applauded by keeping the ancient wisdom undescended which now requires conventional language to put across modern society.\textsuperscript{10}

Apart from using treatment mentioned in the Samhitas, they follow many unique treatments which are known to local Visha vaidyas, since ages which are mentioned in Malayalam Visha text book and are passed from generation to generation in the family of Visha vaidyas. Many Visha vaidya families in Kerala are practicing Oothu chikitsa.\textsuperscript{10}

**MATERIALS AND METHODS:**

Literary review from the classical text Visha vaidya sarasamuchaya, visha Vaidya Jyotnita a treatise on Agada Tantra principles written by C.K Namboothiri\textsuperscript{11} have mentioned a very unique method of treatment in snake bite cases called as Oothu or Oothu chiktha( Blowing therapy).\textsuperscript{12}

*Oota/ Oothu chikitsa:*

This is a procedure of blowing medicines into the ears and over the scalp of a patient who is in the subconscious state. Oothu chikitsa is typically done in snake bite poisoning as an Atyayika chiktsa (emergency management)

**Indications:**

A Visha vaidya mainly employs this treatment modality when any or all of the following symptoms appears in a snakebite victim like delay in response to verbal and physical stimuli, drowsiness, drooping of the eyes, and numbness over the tongue, mouth and scalp, pain all over the body, paralysis of jaw, tongue, larynx and neck, headache, dizziness, vertigo, excess salivation, formation of mucous and fluids in the chest, eyes, etc.\textsuperscript{12}

**Procedure:**

Oothu chikitsa is an effective emergency management. Drugs namely Shunti (Zingiber officinale), Maricha (Piper nigrum), Dusparsha (Tragia involucrata), Ishwari (Aristolochia indica)\textsuperscript{11} are taken in equal quantity, cut into small pieces. This is then chewed by three people who are devoid of any intoxication or have not consumed any Teekshna dravyas (high potency drugs) similar to visha.

Patient is made to sit comfortably on a chair and two of the attendees stand near the ears of the patient and one at the back. After thorough chewing of the drugs the air should be blown into the ears and murdhni (Centre portion of the scalp-top of the head) neither too hard nor too slow synchronously. This procedure can be done up to 150 times. If the condition is improving then the procedure can be repeated for more number of times. Care should be taken not to spit out the medicines kept in the mouth.\textsuperscript{13,14}

This Oothu chikitsa is very effective against Vata and Kapha symptoms that are produced by Visha (poison) in the first three Dhatus (major structural components of the body). The drugs used in Oothu chikitsa with its probable action are described in table no 1.

**OBSERVATION**

Oothu chikitsa was done in conditions of heaviness of head and drowsiness in a patient with viper snake bite. This procedure was done by the authors under the guidance of Vd. Shri Bramhadattan Namboodiri, at Ullanoor Mana, Trissur dist., Kerala.

Vd. Shri Bramhadattan Namboodiri has been practising visha chiktsa since many years and has successfully treated many patients of envenomation. This method of treatment was done in one such case and a detail of it is as follows. The patient was in his subconscious mind for three of us stood on either side of the patient and one on the backside of the chair on which the patient was seated. One attender was made to hold the head of the patient. Other three of us chew the three dravyas (Shunti, Marica, Ishvari) in our mouth until it was fine powder and blew onto the scalp (person standing behind the patient) and to the ears (persons standing on either side). After blowing around 100 times the patient showed signs of consciousness by moving his limbs and fingers. He was given other symptomatic treatments immediately by which he survived the poisonous bite.

This practice is done widely in Kerala state by the vaidyas. It is seen done in cases of snake bite, where we need to buy
time to treat the patient. Oothu chikitsa is done immediately when a person is in his semi-consciousness. Few reviews mentioning the reference of oothu chikitsa in snake bites has been told in samanya visha chikitsa by visha vaidhya jyotsnika.14

DISCUSSION
According to charaka, there are instances explained where the life is deteriorating and have told methods to resuscitate a baby after delivery and brought back to life. Similarly during envenomation this chikitsa is done either to resuscitate a person or to buy time by bringing the person to consciousness. He says that the child is awakened by the following few techniques such as gently striking the stones near the root of the ear, and sprinkling of cold or hot water over its face which removes the obstruction in the way of prana and re-establishes consciousness and life. 15

Relation between ear and Autonomous nervous system and heart: a study done in chain saw workers showed that those exposed to too much noise and vibrations showed negative effects on the autonomous nervous system. It was also seen that the vibrations in the ear due to chain saw made changes in the internal factors of the blood vessels and thus the heart too.16

A method said to allow non-invasive cervical vagus nerve stimulation through the skin of the neck has been developed and is under investigation in patients with cluster headache17 and migraine 18. This current study shows a relation between the vagus nerve stimulation in the ear and its connection with the heart functions 19. This may be the reason why Oothu chikitsa helps us buy time during poisoning treatment by keeping the heart functions low and tumbilng the speed of spread of poison in circulation.

One more case study has showed interrelation between the ear and heart through the vagus nerve. The vagus nerve innervates the sinoatrial (SA) node and atroventricular (AV) node in the heart. The auricular nerve branch of the vagus nerve, also known as Arnold’s or Alderman’s nerve, supplies the inner portion of the external ear.20 Study shows that vagus nerve stimulation has therapeutic potential for myocardial infarction-induced ventricular arrhythmias. In this study it was seen that the vagus nerve stimulation was able to reverse hypersympathetic nerve activity-induced ventricular electrophysiological changes and subdue the occurrence of ventricular fibrillation.21

Action of Shunti: Shunti is a common drug used in many conditions among which one is in snake bites. A study confirms use of Shunti to treat respiratory diseases or as an antidote for snake bite. It is also considered a strong aphrodisiac 22. Shunthi reduces blood pressure and cardiac hypertrophy by activating PPAR receptors on heart, blood vessels and inhibiting the entry of calcium ions into the cell.23

Action of Marica: Marica has an effect on lowering blood pressure possibly through calcium channel blockade.24 Marica is used by many Vaidyas (physician) and folklore practitioners all over the country in snake bite management. Its seed powder mixed with butter is given orally against snakebites another combination of Flower paste with ghee is given orally in sarpa visha (snake poison). 25 Piper is said to be an effective drug used to neutralize the snake venom. 26

Action of Dusparsha: Studies show that decoction of leaves of Tragia involucrata and Aristolochia indica is used to cure scorpion, insect and snake bites. 27,28

Action of Ishwari: Iswari is said to be an antidote in snake poisoning. Direct reference is given in our classics regarding the same. Some studies depict use of Iswari in many tribal clans as an antidote which is used in the following way; Root powder is sniffed; root juice is given orally and root paste applied locally. This drug proved effective against lethal action of snake venom. 29,30

Oothu chikitsa is done with the use of Teekshna dravyas. These drugs arouse the senses by acting on Manovaha strotas (structural or functional channels of mind) thus aiding in retrieval of consciousness12. By analysing the action of the four drugs used in Oothu chikitsa it is clear that it has evident role in treating the snake bite patients either in the form of powder externally and internally due to its Teekshna guna and other pharmacological actions as in anti-inflammatory, analgesic, antidote and anti-oxidant activities.

CONCLUSION:
Vīṣha chikitsā (toxicology) is given upmost position among the branches of medicine owing to its need for emergency management. The practice of managing snake bite cases with Ayurvedic drugs is on the decrease these days due to misinformation and lack of research. There are many traditional vaidyas who are successfully treating snake bite cases using these medicines and practices even this day. There are a number of books written in regional languages on Ayurveda which needs to be translated and understood to improvise the branch and uphold its importance. Oothu is one among them which is used in snake bite cases when the patient is falling unconscious. It
is an emergency treatment which is very handy and can be practiced with minimal requirement.

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Table No. 1: Drugs used in oothu chikitsa with its action on snake bites.

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Drugs used</th>
<th>Latin name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shunti</td>
<td>Zingiber officinale</td>
<td>Anti-oxidant, anti-inflammatory(^{23}), neuro-protective, cardio-protective(^{24})</td>
</tr>
<tr>
<td>2.</td>
<td>Maricha</td>
<td>Piper nigrum</td>
<td>Anti-oxidant, Analgesic and Anti-inflammatory activity(^{25,26})</td>
</tr>
<tr>
<td>3.</td>
<td>Dusparsha</td>
<td>Tragia involucrate</td>
<td>Antidote in snake and other insect bites(^{28})</td>
</tr>
<tr>
<td>4.</td>
<td>Ishwari</td>
<td>Aristolochia indica</td>
<td>Analgesic and antioxidant(^{29}), activity anti-inflammatory, mast cell stabilizing activity(^{30})</td>
</tr>
</tbody>
</table>