



(RESEARCH ARTICLE)



## Achushana (sucking of blood): An emergency management of snakebite

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### Abstract

Snakebite has been considered as a burning and difficult situation not only for the affected individuals but also for the doctors. An individual, seeing the snake feels terrified. When there is bite by a snake one feels that the life is in danger now and death is unavoidable. This is, as evidence say, the main cause of death due to snakebite. So a patient with snakebite when comes to the physician shows the serious signs and symptoms and the physician also faces dilemma in diagnosis which is the prime important factor to become success. A patient of snakebite commonly visits the physician with a huge number of attendants with anxiety, fear and lots of questions. This makes the situation more confusing and even the physician has to take tension.

Ayurveda is unanimously agreed to be the most ancient health science dealing with almost all unwanted states of health (disease). The great scholars and founders of Ayurveda, along with the medical and surgical disease conditions, also discuss poisoning with priority. Among all the poisonings snakebite is considered to be potent one which need prompt action of the physician in absence of which the life of the patient may be lost.

The Ayurvedic scholars Charaka, Susruta and Bagbhata very nicely describe the seriousness of snakebite (**SARPADANGSA**) and advice to take step to prevent the spread of the bisha by following a number of procedures. Out of all one procedure is (**ACHUSHANA**) which is said to apply with the aim to expel out the poison contaminated blood by applying sucking.

This procedure is not supported by the modern Toxicologists. Hence, a discussion on the topic is seemed to have importance. Hope this discussion will be able to convey information not only to the Ayurvedic fraternity but also to the Modern field with a message to re-evaluate the concept in modern scientific character.

**Keywords:** Snakebite; Unwanted states of health; Achushana; Modern toxicologists

### 1. Introduction

A person may fall ill basically due to 2 groups of causes – (1)internal and (2)external. Among the external factors of disease exposure to poison (Bisha) is one which produces emergency with chance of fatal outcome. When the poison is considered then it becomes clear that, among all the poisonings snakebite is of more intensity with more chance of fatal outcome. Considering the fact with importance like the modern medical science (Toxicology), the Ayurvedic scholars, before 3000 -5000 years advice the Toxicologists (Bishavaidya) to treat snakebite with top importance, sincerity and seriousness. Any negligence or late in decision making or installation of treatment may prove to be fatal to the patient and may invite serious allegation of negligence against the physician.

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Ayurvedic toxicology describe 24 upakrama (treatment procedures for poisoning - (Bishapidita awastha) out of which ACHUSHANA(sucking of poison mixed blood following certain principles ) is an emergency procedure. With this procedure the poison mixed blood is advised to expel out from the system as Ayurveda trusts the spread of snake venom to be through blood (Rakta).

The modern management principles of snakebite does not support the thousand year old concept. Hence it is considered to be of importance for an Ayurvedic person to try to appraise the scientists the concepts of the 3 pioneer scholars of Ayurveda Charaka, Susruta and Bagbhata mentioned in their famous books – Charaka Samhita, Susruta Samhita, Ashtangahridaya and Ashtanga sangraha with an aim to get some feedback on the scientific value of the procedure.

### *Aims and objectives*

This is a literary study is conducted with the following aims and objectives

- To study the details about the treatment procedure “ACHUSHANA” mentioned in the classics in detail
- To study the modern management principles of snakebite with special reference to sucking of poisoned blood
- To arrange the findings as mentioned above in the form of an article and send to peer reviewed journal for publication with the aim to circulate the concepts among the scientists, researchers and academicians
- To get opinion from the scientists, researchers and academicians on the concept “application of sucking of poison mixed blood from the system” after proper analysis, study and experimentation in due course.

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## **2. Material and methods**

The study was conducted with the below mentioned materials by following the methods –

- The 4 authentic books Charaka Samhita, Susruta Samhita, Ashtanga Hridaya and Ashtanga Sangraha were studied in the central library of Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India
- All the findings related to the aims and objectives mentioned above were noted
- The findings were arranged in the form of a scientific article
- The article was sent for publication in popular, peer reviewed journal with the expectation of appraisal of the scientists, researchers and academicians.

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## **3. Results**

The study revealed the following observations related with the topic –

- Chushana (Achushana) is mentioned in the 5<sup>th</sup> position in the Chaturbingsati Upakrama (treatment modules of poisoning). The treatment mentioned just at the prior (4<sup>th</sup>) position of it is Nispidana (squeezing to expel out blood through the site of bite) [1]
- Achushana is the procedure by application of which the poisoned blood (bishakta rakta) is brought out by sucking through the site of bite [2]. Blood is the salter of poison. Poison, after entering into the body (specially in case of snakebite) vitiates blood first and circulates in the whole body with it producing many signs and symptoms [3].
- If the site of snakebite is in such an area where tourniquet (arista) cannot be applied there achushana karma is advised to utilize. It is said to be the best treatment for all types of snakebites [4].
- Before doing Achushana the physician is advised to fill the oral cavity (mukha) with cloth (bashtra)[5].
- For Achushana an incision is advised to give below the tourniquet at the site of bite. Sucking is specially indicated in the parts of the body where there is abundance of flesh. The physician is also advised to perform the Achushana karma only after filling up the oral cavity with mud (mrid), ash (bhasma), antipoisnous recipes(agada) or cowdung (gomaya) [6]
- As blood (rakta) is said to be the seat of life (Jivana), to avoid expulsion of pure blood (suddha rakta), the character of poisoned blood (bishakta rakta) are mentioned. They are – foul smell (durgandha) and cracking sound when put into fire (agnou chatachatayate). The physician, at the time of sucking, has to examine the sucked blood continuously for these two characters to prevent loss of pure blood [7].
- The modern concepts on snakebite management is not at all in support of sucking of blood in case of snakebite as (i)the person doing the sucking procedure has to put his mouth on the venomous wound, (ii)there is chance of nerve and blood vessel damage leading to infection[8].

#### 4. Discussion

After going through the classical mentioning on Achuchana karma the discussion can be incorporated as follows –

- Snakebite is considered as an emergency entity by both the Ayurvedic and Modern scholars of medical science. It is unanimously agreed that, snakebite must be treated with utmost care, importance and expertise. Any negligence and /or deficit may prove to be fatal to the patient.
- Among the 24 management procedures of snakebite “achushana” is mentioned and discussed with importance. As the Ayurvedic scholars agree that, poison (bisha), after entry into the body, first causes vitiation of blood (rakta) which is a continuously circulating element in the body reaching to each and every unit easily and quickly spreads and ultimately vitiates all the body elements leading to death. Hence they give the concept of expulsion of blood by using sucking process after giving incision at the site of bite. Ayurvedic concept of the spreading mechanism of poison justifies the necessity of achushana in snakebite. It is easily understandable that, when the carrier (rakta) will be destroyed the chance of spread of the spreading object (poison) will also be destroyed.
- The criteria of poison mixed blood and frequent testing of sucked blood (achuchita rakta) is also interesting. Loss of pure blood from the body is considered to be threatening to life (jivanashaka). Hence in the context of (achuchana) achushana characters of poison mixed blood (bishadushita rakta) is mentioned to make the physician alert and conscious.
- As per the modern concepts snake venom is made of large toxic molecules that are unable to enter directly in the bloodstream. They are dispersed by the lymphatic vessels running parallel to blood vessels and enter the bloodstream through veins near the heart [9]. Hence the concept of vitiation of the whole body by the poison circulating with blood cannot be considered to be a rejectable one which stands in support of achushana in snakebite.
- The Ayurvedic classics viz. Charaka Samhita, Susruta Samhita, Ashtanga Sangraha and Ashtanga Hridaya have unanimously mention(s) 24 procedures for management of the patients of poisoning. All have also mentioned and described the method of Achushana (sucking of blood through the incision given at the site of bite or even through the bite injury). From the descriptions of the procedure and benefits it becomes clear that, the basic and sole importance of this process is in the poisonous bites, specially in the snakebite patients. All points mentioned in the context has importance and applicability in the situation of snakebite. When considered the other situations of bite it is observed that, in those situation no need of expelling out of more quantity of blood. If immediately after the bite the bitten part will be squeezed (nispidana) and the quantity of blood that will come out easily will be expelled out that will be sufficient
- The modern invention of Anti Snake Venom is reducing the need of more number of treatment procedures to be applied in the snakebite cases. Only justified use of ASV proves to be sufficient to save the life of the patient. Hence, probably the modern toxicology is not accepting the procedures like application of tourniquets (aristabandhana), squeezing (nispidana), sucking (achushana) etc. as mentioned in the Ayurvedic classics. Hence it can be considered that the background of identification of 24 procedures was the need of the time.
- The use of Anti Snake Venom, which can be considered to be the only weapon to fight with the dreadful condition “snakebite” is not free from untoward / adverse effects and cannot be used without prescribed infra structure. In most of the times transferring of the patient to a hospital where ASV facility is available takes harmfully long time. Hence the importance of the knowledge, understanding, applicability and evaluation of not only the Achushana but also all 24 procedures of treatment of poisoning cannot be denied.

#### 5. Summary

From the study the following points can be incorporated as the summary

- Poisoning, specially with snake venom, is a dangerous situation where prompt action with proper justification and expertise is needed.
- Achushana is a process advised for expulsion of blood from the victim’s circulation which is vitiated by the poison. It is specially indicated and applicable in case of snakebite.
- The process is not danger free. It may be proved to be dangerous to the physician if appropriate precautions will not be taken which was not unknown to the ancient scholars. Hence the Ayurvedic authors have advised precautions to be taken nicely like keeping soil powder (pangshu /mrid), ashes (bhashma), anti-poisonous drugs (agada), cowdung (gomaya) etc. inside the oral cavity. Among the substances advised to keep in the mouth the role of agada (antidotes) is clear. The mechanism of action of the others are difficult to understand and explain.

- Anti Snake Venom, though the effective and useful weapon against snake venom, then also there are some difficulty in using it with regards to situation, condition and infra structure.
- An effort to learn, understand, justify and evaluate the effectiveness and utility of the procedure should be made and inspired.

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## 6. Conclusion

To conclude it can be said that, the study, understanding and evaluation of achushana may provide a new, effective and easy treatment procedure for poisoning specially with snake venom.

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