

Site and Elimination of Snake Venom Sarpabisha Adhithana and Nirmuchana : The Concept of Ayurvedic Scholars

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ABSTRACT

Snakes are considered as the most venomous creature among all in the category . A number of creatures in the environment are identified as poisonous . Snakes mostly move around the human beings due to a number of causes naturally and in most of the situations , even after coming to the contact , they do not cause any harm rather goes away . Due to a number of causes the snakes bite and inject poison on the victim which results in serious sequences like death . When the discussion on the snake is done questions on the site of production , collection and mechanism of envenomation arises . The Ayurvedic classics opine on these important points related to snake venom (Sarpabisha) elaborately a discussion on which is felt to be beneficial for the modern scientific society also . Special attention of the researchers is tried to draw by discussing the concept of the Ayurvedic scholars on the topics .

Keywords: Snakes, Venomous Creature, Snake Venom, Ayurvedic Scholars

INTRODUCTION

Since creation the human society have been experiencing many experiences of exposure to poison and poisoning . Among the sources of poison snake is identified as the most potent and dangerous one . Being bitten by a snake , in most of the situations , the victim loses the hope of life as snake venom is traditionally considered to be always fatal . But study shows that , all snakebites are not harmful to the victim as all snakes are not poisonous . Even sometimes a snake of poisonous class does not inject poison to the victim . It is also established that , most of the snakebite deaths are due to fear , not due to poison . When snake and snakebite is discussed generally 3 questions arises – (1)Where the snake venom is produced ? (2)At which part of the body of snake venom is stored ? and (3)How and under which circumstances the snake injects poison to the victim ? The Ayurvedic scholars , in their famous and popular books , discuss interestingly on the points and give solution in clear language which have wide ranged scope of further study and research . The effort of the author to discuss on the concepts of the scholars is aimed to explore, disseminate and share the experience and ideas of them on the important points for further study and research .

AIMS AND OBJECTIVES

The present literary study is done with the following aims and objectives –

1. To study the Ayurvedic classics searching for the solution of the 3 important questions related to snake venom viz. place of production and storage of snake venom and process and causes of injecting the poison to the victim .
2. To give an effort to discuss the classical concepts in modern light
3. To arrange the observations of the study in the form of a scientific article
4. To send the article to a popular , peer reviewed , widely circulated journal for publication with the aim to draw the attention of the researchers and scientists towards the classical concepts expecting further research and evaluation

MATERIALS AND METHODS

The study was conducted by using the 4 Ayurvedic classics , Charaka Samhita, Susruta Samhita , Ashtanga Sangraha and Ashtanga Hridaya as study material . The mentioned classics were studied thoroughly at the Central Library of Sri Sri College of Ayurvedic Science and Research Hospital and the article was prepared by following the below mentioned methods –

1. The mentioned books were studied sincerely to gather informations related to the aims of the study
2. The findings were collected and arranged accordingly
3. Effort was given to justify the findings in both Ayurvedic and modern way
4. A summary containing the messages developed from the study was added
5. The article was ended with a short conclusion and the list of references
6. Ultimately , the article was sent to a reputed , peer reviewed , widely circulated journal with the aim to share the knowledge and observation of the ancient Ayurvedic scholars with the researchers and academicians of the field expecting further study , elaboration and analysis .

OBSERVATION AND RESULT -

The study revealed the following observations and results –

1. **CHARAKA SAMHITA** – Snake venom (sarpabisha) remains in the whole body of the snake (sarbadehashritang) . It comes out through the fangs (dangstra) when it becomes angry (krodha) . But when the snake is hungry (aharahettoh) or in fear (bhayat) venom does not expelled[1]
2. **SUSRUTA SAMHITA** – Venom remains in the whole body of the snake like shukra in human (sarbashariragam) . When it becomes angry venom comes out as human shukra comes out from the body due to orgasm (manthana karma) (nirmanthana) . The venom is injected by the snake through the fangs (badishabat dangshtra) [2]
3. **ASHTANGA SANGRAHA** – The study did not reveal any information related to the present aims and objectives in Ashtanga Sangraha .
4. **ASHTANGA HRIDAYA** – Study of Ashtanga Hridaya did not reveal any discussion related to the present aims and objectives .
5. **SEARCH IN THE INTERNET SOURCES** –
 1. Snake venom is made by organs that evolved from salivary glands . It is a form of saliva that has been modified into venom over its evolutionary history [3]
 2. Snake venom is produced in the back of the head of snake in the salivary glands [4]
 3. The venom of cobra remains in the short fangs at the front of the mouth [5]
 4. The gland of the snake where venom is produced is a modified salivary gland which is located just behind and below the eye [6]

5. Venom is a poisonous secretion of an animal is produced by specialized glands . They are often associated with spines , teeth , stings or other piercing devices [7]
6. Snake venom is stored in the secretory cells [8]
7. The snake venom is stored in large glands called alveoli before being conveyed by the fangs[9]

DISCUSSION

The observations and result of the present study can be discussed as followed –

1. **PRODUCTION OF SNAKE VENOM** – Charaka and Susruta both scholars are seemed to remain silent in commenting directly on the production of snake venom (sarpabisha) . The modern sources mention the place of production of snake venom in the salivary gland situated in the back of the head of the snake .
2. Both the scholars , Charaka and Susruta , say that snake venom remains in the whole body of the snake . But in the internet sources have not given such comment . The sources say that, it's place of production is the venom gland . Hence the place of storage also can be considered to be the same gland . Also it is said that , it is stored in the secretory cells .
3. In relation to injection of venom to the victim Charaka and Susruta say that, snake venom is expelled by the snake through the fangs when it becomes angry and hungry . The modern sources have not say these two as the causes of injection of poison and only say that it's route of elimination is the fangs .
4. The study shows that, there is some controversy in the opinion on the place of production , storage and cause and route of injecting the poison . In relation to the place of production Charaka and Susruta have not mentioned directly . But regarding the storage the whole body is mentioned by the 2 scholars whereas modern sources say it to be the venom gland which is a modification of salivary gland . But on the route of elimination of poison the opinion is same , that is the fangs .
5. On the points mentioned in the aims and objectives further study to find the actual facts seems to be important .

SUMMARUY

The following statements can be incorporated as the summary of the present study –

1. Charaka and Susruta , the pioneer of Indian Medicine and Surgery , are the scholars who sincerely observed and researched on all the health issues including the potent agent harmful to the health “POISON” .
2. At the time of discussion on the poisons they have elaborately discussed on snake poison also . When going to discuss on the snake venom also discussed on the snakes in detail .
3. During the course of discussion on the snake venom the two scholars have not forgotten to discuss on production , storage , cause and route of injecting poison by the snake also along with other topics .
4. The two Ayurvedic scholars consider the site of snake venom in the whole body , but not mentioned directly the place and mechanism of production of it whereas the modern sources say the production and storage of snake venom to be the venom gland which is a modification of the salivary gland .
5. In relation to the cause of elimination of snake venom Charaka and Susruta has mentioned anger and hunger , the modern sources have not commented on the point directly .
6. In relation to the route of injection of the poison by the snake both the Ayurvedic and modern sources express the same opinion as the fangs .

CONCLUSION

The conclusion of the study can be stated in the following lines –

Charaka and Susruta are the scholars with depth of knowledge and enthusiasm who conducted in depth study on the topics . Their study and research on snake , snake venom , it's effect etc. is interesting . The opinion of the two scholars on place of production , site of storage , cause and route of elimination etc. are also very interesting and have ampoule of scope for research . Effort to explore the background of the concepts is solicited by the author .

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