

## Utility of incision /excision (Utkartana) in poisoning: A theoretical analysis

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### Abstract

Poisoning can be accepted as the common and most challenging situation for the human society. Exposure to poison is an old age experience of the human society. It is a dreadful situation as it has the potency to cause death even immediately, before installation of treatment and, in most of the situations, after application of the best available measures of treatment.

UTKARTANA (Incision /excision) is a method of treatment mentioned among the 24 treatment modules of treatment of poisoning by the Ayurvedic scholars. Under this headings (heading)the victim of poison / physician is advised to cut away (excise) the part affected, if possible, or advised to give incisions on the affected part to expel out the poison by squeezing or sucking through it. It is expected that, if the affected part will be cut away immediately then the poison will not be able to spread to the other part of the body. On the other hand, if immediately incisions will be given at the site through which poison entered and the poisoned blood will be expelled out by squeezing or sucking then also there is scope of expelling out of the poisoned blood and the quantity of poison in the system will reduce.

Ayurvedic classics recommend this process in poisoning, specially in snakebite. But there are some controversies in it's applicability. Hence throwing light on this topic can be considered to have importance and impact.

**Key words:** Poisoning; Most Challenging Situation; Utkartana; Ayurvedic Classics; Modern Toxicology

### 1. Introduction

Poisoning is an incidence usually with unexpected outcome of the human society since time immemorial. In the Indian classics many incidences of poisoning with fatal outcome is available. Even in the incidences of wars, death due to injury with arrows are seemed to be due to use of some poisons on the pointed end of the same. In some literatures there are also mentioning of poisoning of water, food etc. of individual or mass with potent poisons. The Ayurvedic scholars viz. Charaka, Susruta, Bagbhata etc. have specially discussed on poisons in physician's view. They have discussed the poisons specially in two groups – (1)Sthavara (inanimate origin like – plants and minerals ) and (2)Jangama (animate origin, like – snake, spider, insect, lizard, scorpion etc. ). As the scholars are dealing with the prevention and cure of the diseased states they discussed about the treatment modules of poisoning in detail with top priority.

“UTKARTANA” is one of the 24 modules of treatment mentioned by the Ayurvedic scholars which includes two procedures – (1)incision and (2)excision. Incision is the process of producing cut injuries in a site upto a desired depth whereas excision indicates the process of separating a part from the body by cutting with a sharp weapon. The treatment “UTKARTANA” is indicated in the Ayurvedic classics specially for the state of poisoning with snake. It is said that, snake venom (sarpabisha) is a very strong poison that has the capacity to spread quickly to the other parts of the body with blood. Hence, considering the situation, the patient / physician should excise the bitten part immediately after the bite.

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If excision is not possible then some incisions should be applied on the bitten part and some quantity of blood should be expelled out by squeezing (squeezing) or sucking process. This reduces the amount of poison in blood and helps the physician to treat the patient with use of other procedures.

There is controversy in the opinion of using this procedure as a treatment of snakebite.

Hence a discussion on the applicability of it both in Ayurvedic and Modern light is considered to have importance.

### Aims and objectives

The present literary study is basically aimed to –

- Study detail about the meaning, definition, procedure of application etc. of incision, excision and (of) Utkartana as mentioned in the Ayurvedic and Modern classics and other sources
- Study on the applicability, indications, contra-indications, benefits etc. of Utkartana as described in the Ayurvedic classics
- Study in detail on the modern concept of applicability and utility of incision/excision in diseased state with special reference to poisoning.
- Frame an opinion on the applicability of utkartana in poisoning basing upon the classical descriptions available
- Prepare an article for publication in scientific journal for appraisal of the scientists with an appeal of further study, research and evaluation of the procedure.

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## 2. Material and methods

The study was conducted in the following steps –

- (The Ayurvedic classics, specially, Charaka Samhita, Susruta Samhita, Ashtanga Sangraha and Ashtanga Hridaya and the books of Modern Toxicology were studied in Central Library of Sri Sri College of Ayurvedic Science and Research Hospital, Sri Sri University, Cuttack, Odisha, India
- The informations related to the aims and objectives of the study were collected
- All informations collected were arranged in the form of a scientific article
- The article was submitted for publication.

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## 3. Result

From the study conducted the following observations were observed as the result of the study –

- The great scholar, the father of Indian medicine Charaka, mentions utkartana in the 3rd place when mentions the chaturvingsati bisha upakrama (24 treatment modules of treatment of poisoning). This process is preceded by ARISTA (ARISTABANDHANA)(application of Tourniquet) and followed by NISPIDANA (squeezing)squeezing. The word “UTKARTANA” literally means “to cut” which indicates “excision” (to detach the part from the body) and “incision”(to apply incisions upto the depth that causes bleeding ). This process is advised to apply if the bitten part is not a Marma (vital part) [1].
- Explaining the benefits of Utkartana it is said that, excision (cutting away) of the bitten part gives the benefit as “cutting of the root of a tree”. When the root of a tree is cut then it dies. In the same way if the bitten part is excised then there is no further chance of spread of the poison. [2]
- Chedana is said to be good in all types of snakebite. ACHUSANA (sucking) is mentioned just before and DAHANA (cauterization) is mentioned just after this upakrama [3]
- An incision is advised to make below the Arista at the site of the bite and advised to suck. This process is said to be applied specially in the fleshy areas [4]
- When snakebite occurs in a fleshy portion of the body sucking of blood from the area is advised after giving incision [5]

No special discussion was found in the modern Toxicology reflecting the utility and applicability of excision/incision in treatment of poisoning. Rather in reference of snakebite treatment it is advised to avoid.

#### 4. Discussion

From the observations of the study the following facts can be taken in consideration for discussion –

Charaka has given a clear concept on the process “UTKARTANA” with special reference to its applicability, utility and mode of action in snakebite. The example of cutting the root of the tree to destroy it is very practical and self explanatory. Cutting of the root is the best and only fruitful way to destroy a tree. A tree will again show its existence even if all the branches and the stem will cut. But, keeping all the other parts untouched, if the roots will be cut the tree will definitely die. In the same way, as described, if the bitten part of the body is not a marma (vital part) then it is advised to excise immediately. But, though not explained by the authors, the patient/ physician must be sure about the type of the snake (poisonous or non poisonous) and the importance of the bitten part for continuation of life as well as for leading the future day to day activities. Here the need of benefit and loss of excision of the part is most important. For example, suppose a poisonous snakebite occurred on the finger or toe. If immediately it will be excised then the chance of spread will not be there and the life of the person will be saved. But if the bite will be on the chest, head, arm, thigh etc. then it is difficult to support the decision to apply excision as a treatment process.

Another applicability of utkartana can be justified in the form of “incision” at the site of bite. As the Ayurvedic classics say poison spreads in the body in circulation. After entry into the body it first causes vitiation of blood and during the process of circulation it spreads in the whole body. Hence, it will first vitiate the local blood which will be followed by vitiation of the whole blood circulating in the body. If immediately after bite the local blood can be expelled out by any means then definitely the chance of vitiation of the whole blood can be reduced. With this concept the idea to give incision on the bitten part followed by squeezing (squeezing) or sucking can be justified.

Modern Toxicology does not support the excision /incision procedure in snakebite. The reason behind it is, probably, the strong and effective use of Anti Snake Venom in the poisonous snakebite cases.

But, since the availability and applicability of Anti Snake Venom is not easy and immediate since use of these two methods as treatment of snakebite can be considered and applied in selected cases under selected situations.

##### 4.1. Summary

In completion of the study, as summary the following points can be considered –

- Ayurvedic scholars, before thousands of years of Christ, encountered with the snakebite patients, did the differential diagnosis of poisonous and non poisonous bites and tried to apply effective treatment with proper justification and expertise.
- In the past the physicians (BISHVAIDYA) used different treatment procedures to treat the patients of poisoning (BISHAPIDITA PURUSHA) as per necessity, availability and utility. For selection of the treatment principle / principles they had to apply their knowledge and experience. Hence extensive training in the field was advocated.
- “UTKARTANA” includes two procedures – (i) incision – to cut away the affected part. It should be done immediately after bite. But to do it, the poisonous nature of the snake and the post effect of excision of the part must be judged appropriately and efficiently. If decided for excision there should be no delay in as delay may be proved to have no benefit.
- Though the modern Toxicology is not in favour of the procedure as a treatment of snakebite but its applicability should again be evaluated, specially by conducting a survey study in the snakebite prone remote areas where the traditional physicians are being preferred for treatment of snakebite. Their experience on the procedure should be documented and analysed scientifically.

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#### 5. Conclusion

Snakebite is an old age life threatening condition faced by the human society. Continuous effort to find out treatment of the situation is being made in different levels. But, probably, the efforts are not attaining success upto the level of expectation. Hence the need of more study in the direction paying attention on the Ayurvedic concepts can be considered to be important.

Let the scientists to extend hand to conduct more study on snakebite management paying attention on the ancient indian concepts mentioned in the ayurvedic (Ayurvedic) classics.

## **Compliance with ethical standards**

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