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Review Article

COMPARATIVE STUDY OF ANCIENT ANESTHESIA WITH MODERN ANESTHESIA: A REVIEW

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ABSTRACT

The usefulness of anesthesia was noticed by surgeons since earliest age and they were prepared to attain this painfree condition. The oldest and first ever reference of herbal anesthetic drug was noted in Sushruta Samhita - only book which deals with the knowledge of practical surgery. Sushruta was the first person to make use of opium, alcohol to sedate the patient to cut nose in 200 BC. Sushruta has mentioned Karmas for operative procedure in which Sangyahanana comes under Poorvakarma. Sushruta has described Dravyas like Madya. Charaka has defined Tikshna Sura need be given to the patient earlier to surgery. Alongside few Ayurvedic drugs like Vacha, Bramhi and Parasikayavani were defined by several investigators to apply post operatively to lower pain, swelling but major herbal anesthetic agent is still expected. In present paper comparison has been made between ancient and modern anesthesia to explore fundamental principles of Sangyahanana.

Keywords: Anesthesia, pain, Sangyahanana, sensation, Shalya

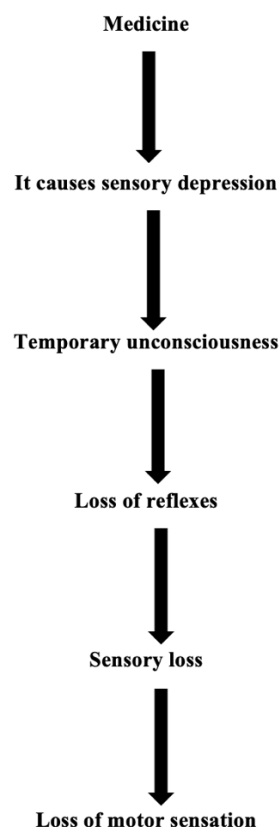
INTRODUCTION

Reversible loss of consciousness is known as anesthesia.¹ Anesthesia can be correlated with Sangyahanana in Ayurveda which means loss of sensation. Though a large number of references related to surgical operations are available in Sushruta Samhita and in surgical text but very less is explained about Sangyahanana. In Rigveda we realize that legs have been amputated and changed by iron materials, damaged eyes have been taken out. Sangyahanana is essential and useful in Ayurvedic education and hence understanding of fundamental principles of Sangyahanana is required. The introduction of modern anesthesia in medical practice is new and has gained huge development in coming years. Modern anesthesia describes similar function of anesthetic drugs.

- a) Analgesia
- b) Sedation

The story of the advancement of Ayurvedic surgery is prolonged and interesting. In this review we will talk about the outlook of Sangyahanana (anesthesia) employed by Indian surgeon during surgery.

MODE OF ACTION



Loss of motor sensation

When the sense channels (Sangyavaha Nadi) are obstructed by Vatadi Doshas, Tamo Guna increases and obstruct the feeling of happiness and pain.² Acharya Sushruta has mentioned the use of Madya (wine)³ to reduce the pain of surgery. In the very beginning of first chapter of Sushruta Samhita, it is very well mentioned, and references reveal that Acharya Sushruta had done different surgical procedures.⁴ The operative procedures like laparotomy and extraction of calculus were not possible without anesthesia. Therefore, we can say that they were known to the science of anesthesia and the surgical procedures were possible to perform easily due to this only. In Charaka Samhita⁵ it is mentioned to use Sura, Madira and Asava to reduce pain during the delivery of the obstructed foetus. In Bhava Prakash⁶ book describes the use of Ahiphen and Bhanga as analgesics. In the field of postoperative pain management much research are going on and revolutionary development is occurring. Today the importance of Basti and Virechana preoperatively is established. The drugs like Jatamansi, Ashwagandha, Brahmi, Vacha, Parsikyavani and Shankhpushpi are being used as pre-medications for achieving tranquility and hypnosis before

operation. Therapeutic methods can be categorized into three viz: Poorva Karma, Pradhan Karma and Paschat Karma.⁷ Importance was given to the preparation of patient before surgery by Sushruta it was known as Poorva Karma. In modern, investigations of the patient before surgery should be specific according to the general history and clinical signs, they include cbc, b.t, c.t, dlc, bsl, esr.⁸ It is now possible to encounter the toxicity or side effects of modern anesthetics with help of these drugs. Post operatively Parijata, Triphala Guggulu and Shigru are used as anti-inflammatory analgesics. Warm ghee along with Yastimadhu paste can be used in post-operative care in the case of wound caused by instruments during surgery.⁹ Due to non-availability of Ayurvedic herbo-chemical anesthetic, we are using allopathic anesthetic drugs. Western surgeons have made fast development in the direction of reducing severe pain of surgery. Western anesthesiology developed very fast since its introduction in 1846. The first public demonstration of ether anaesthesia was given on 16 October 1846 at the Massachusetts General Hospital for the removal of a vascular tumor from the neck.¹⁰

List of Ayurvedic and modern drugs used for anesthesia are given in table 1 and table 2.

Table 1: Ayurvedic Drugs

1	Ahiphen	Post operatively to reduce pain
2	Bhanga	Post operatively to reduce pain
3	Jatamamsi	Post operatively to achieve Tranquility
4	Ashwagandha	Post operatively to achieve Tranquility
5	Parasikayavani	Post operatively to achieve Tranquility
6	Shankhpushpi	Post operatively to achieve Tranquility
7	Brahmi	Post operatively to achieve Tranquility
8	Vacha	Post operatively to achieve Tranquility
9	Nirgundi	Post-operative anti-inflammatory action.
10	Rasna	Post-operative anti-inflammatory action
11	Erandmoola	Post-operative anti-inflammatory action.
12	Bhringraja	Post-operative anti-inflammatory action.
13	Parijata	Post-operative anti-inflammatory action.
14	Shigru	Post-operative anti-inflammatory action

Table 2: Modern Drugs

1	Lignocaine	It comes under local anesthetic group.
2	Bupivacaine	It is long acting local anesthetic drug.
3	Nitrous oxide	It is safest anesthetic drug.
4	Ether	It is colourless volatile liquid used in all Surgeries.
5	Halothane	Anesthesia is rapid smooth & with fast recovery.
6	Thiopentone sodium	It is short acting used for minor surgeries.
7	Ketamine	It is also known as dissociative anesthesia.

ROLE OF AYURVEDA

Based on the studies both Ayurveda and modern anaesthetic drugs seems to show same components. As well as their action on patient also seems to be similar. Ayurvedacharya so obtain same performance from drugs such as Madya, Afim etc. However exact action of these drugs was not clearly explained. As well as drugs such as Madya and Afim are now outdated due to establishment of new drugs. We find the recommendation of Sangnaapanayana Dravyas in Charaka. Except one or two references like this, all the operations were run by Ayurvedic surgeon by gripping the patient either himself or with the support of 4 or 5 assistance. This has guide the way to non implementation or application of surgery by Ayurvedic surgeons. Still, there are certain investigators who could demonstrate that there is a probability of performing spinal anesthesia with Sarapunkha and local anesthesia with Tagara but, Ayurvedic researcher have not been further researched and marketed.

CONCLUSION

Ancient and modern drugs have similarity with respect to their mode of action. The Ayurvedic surgeons are even now in need to get an productive anesthetic drug to use during surgery. The ayurvedic drugs defined here has only used for post-operative pain management to attain tranquility or calmness after surgery. Hence experimenters and investigators should perform substantially to search vigorous potent ayurvedic anesthetic agent.

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