Review Article

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CONCEPT OF SANGYAHARANA (ANAESTHESIA) IN ANCIENT INDIA: A CRITICAL STUDY

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ABSTRACT

Sushruta was profoundly a surgeon and the Sushruta Samhita is the only consummate book we have which deals with the quandaries of practical surgery and midwifery. The paramourcy of anaesthesia was felt by surgeons since primitive age and they endeavoured to achieve this painless condition for surgery. For painless surgery Sushruta used Sangyaharana. It is in the Sushruta Samhita that we first come across a systematic method of arranging the surgical experiences of the older surgeons. Sushruta has described some dravyas like madya (Wine), mohachurna was described in Bhojaprabandha. Charaka has withal described tikshna sura should be given to the patient prior Surgery. Besides some Ayurveda drugs like Vacha, Ashwagandha, Bramhi, Parijata and Parasika yavani were described by numerous research scholars to utilize post operatively to truncate pain, swelling and solicitousness in the patients. However a chief herbal anaesthetic agent is still awaited. A historical perspective of the Sangyaharana (Anaesthesia) utilized by ancient surgeons were described in this study.

Keyword: Sangyaharana, Shalya, Anaesthesia

INTRODUCTION

The meaning of Sangyaharana- anaesthesia is reversible loss of sense. The importance of anaesthesia was felt by surgeons since primitive age and they tried to achieve this painless condition for surgery.

In India, as in all variegated countries, remedial spells and curing mantras led medicine; and the primary man of medication in India became a priest, a Bhisag Atharvan, who held a higher position to a health practitioner in society. The first Aryan settlements within the Punjab have been often attacked by the dark visionless primeval known inhabitants of the country. In the wars the surgeons had commonly to shepherd to the Aryan chiefs and soldiery. So within the Rigveda we find that legs have been amputated and replaced via iron substitutes, injured eyes have been removed out, and arrow shafts have been extracted from the limbs of the Aryan warriors.

The story of the progress of Ayurvedic surgery is long and fascinating. In this study I will discuss the historical perspective of Sangyaharana (Anaesthesia) utilized by archaic Indian surgeon during surgery and some drugs used post operatively to abbreviate pain and solicitousness.

SUSHRUTA'S DESCRIPTION

Trividha karma (Three fold surgical management)

Sushruta in his treaties described three steps in surgical treatment - it is described by Acharya Sushruta in the Vth chapter of Sutra Sthana (1st compendium of Sushruta) as Trividha Karma i.e. Poorva Karma, Pradhan Karma, Paschat Karma. The first step is known as Poorva Karma, second step is Pradhan Karma and the third step is Paschat Karma. Poorva Karma is preoperative measures. The preparation of patients – physically and mentally for Pradhan karma (operation or anaesthesia) is called Poorva Karma. This procedure includes - examination of patients,

examination of disease, the history of prevalent diseases with treatment record, preparation of operation theatre and equipment. As Langhanadi Virekantam Poorvakarma Vranasya Cha. Acharya Sushruta mentioned sixty procedures for wound management. As he mentioned -‘Apatarpanadayo Virechanantam’ means, Apatarpan, Alep, Parisheka, Abhyanga, Sweda, Vimplapan, Upnah, Pachan, Visravana, Snehan, Vaman and Virechana etc. The first step in surgical case management is Poorva Karma. When patients undergo through these procedures then the wound is treated locally as well as systemic treatment is also given and thus all the three dosh are store the equilibrium stage – Samyavastha. By means of these procedures the surgical treatments become safe and successful. For this we consider the following points under ‘Poorva Karma’ – In relation to patient, in relation to treatment, in relation to equipment, in relation to operation theatre, in relation to surgeon and operation, in relation to anaesthetist and anaesthetics and pre-anaesthetic medication. So it is evident that Sushruta has described anaesthesia in the context of shalya karma (Surgical procedures).

HISTORICAL PERSPECTIVE

Acharya Sushruta has mentioned the use of Madya-wine¹ to mitigate the pain of surgery. In the very beginning of 1st chapter² of Sushruta Samhita it is very well mentioned and was accepted as a great problem of humanity. References reveal that Acharya Sushruta – Father of surgery had done different surgical procedures. The operative procedures like laparotomy and extraction of calculus were not possible without anaesthesia. Therefore we can say that they were known to the science of anaesthesia and the surgical procedures were possible to perform easily due to this only. This is also true that this is not described in detail at any place but the references reveal its existence. In Charaka samhita³ it is mentioned to use Sura, Madira and Asava to mitigate pain during the delivery of the obstructed foetus. It is mentioned in Bhojprabandh⁴ (900 A.D.) that Sammohan Churna was used during the Brain surgery of King Bhoja (Mohchurnen

Mohayet - Bhojaprabandha). It was also mentioned to use Sanjivani for revival from anaesthesia. But it does not mention about the composition of these drugs. Sanjivani⁵ is also mentioned in Balmiki Ramayana, which was given to Lakshmana by Vaidya Sukhena to make him conscious. Bhava Prakash⁶ – a book of Ayurvedic pharmacognosy describes the use of Ahiphen and Bhanga as analgesics. Ahiphen – opium is the main source of narcotic analgesics. Majority of updated hypnotic analgesics are derived from opium. This science of life is based on Tridosha and Nadi Vigyan. Sensory (Sangyavahi)⁷ and Motor (Aagyavahi) nerves are very well mentioned in Ayurvedic texts. In the field of postoperative pain management many researches are going on and revolutionary development is occurring. Today the importance of Basti⁸⁻¹⁰ and Virechana preoperatively is established. The indigenous drugs like Jatamansi¹¹, Ashwagandha¹², Brahmi¹³, Vaca¹⁴, Parsikyavani¹⁵ and Shankhpushpi¹⁶ are being used as premedicants for achieving tranquillity and hypnosis before operation. It is now possible to

encounter the toxicity or side effects of modern anaesthetics with help of these indigenous premedicant. Not only the toxicity is reduced, but these are helpful in reducing the doses of anaesthetics, thus they are potentiating the effects also. Postoperatively Nirgundi¹⁷, Rasna¹⁸, Erandamool¹⁹, Bhiringraj²⁰, Parijata²¹, Triphalaguggulu^{22,23} and Shigru²⁴ are used as anti-inflammatory analgesics. The main indigenous anaesthetic drugs are to be explored till date but continuous efforts are going on. Due to non-availability of Ayurvedic herbomineral-chemical anaesthetic, we are using allopathic anaesthetic agents on the principle of Ayurveda. Western surgeons have made fast development in the direction of mitigating severe pain of surgery. Western anaesthesiology developed very fast since its introduction in 1846. Many improvements and advances occurred since that day. It was first used by W.T.C. Morton of Boston in U.S. who gave ether at the Massachusetts General Hospital on 16 October 1846.

Table 1: List of drugs used for anaesthesia

S. No.	Name of the Drug used	Latin name	Anaesthetic use
1	Ahiphen	<i>Papaver somniferum</i>	Post operatively to reduce pain
2	Bhanga	<i>Cannabis sativa</i>	Post operatively to reduce pain
3	Jatamansi	<i>Nardostachys jatamansi</i>	Post operatively to achieve Tranquillity
4	Ashwagandha	<i>Withania somnifera</i>	Post operatively to achieve Tranquillity
5	Parasika yavani	<i>Hyoscyamus niger</i>	Post operatively to achieve Tranquillity
6	Shankhpushpi	<i>Convolvulus pluricaulis</i>	Post operatively to achieve Tranquillity
7	Brahmi	<i>Bacopa monnieri</i>	Post operatively to achieve Tranquillity
8	Vacha	<i>Acorus calamus</i>	Post operatively to achieve Tranquillity
9	Nirgundi,	<i>Vitex negundo.</i>	Post-operative anti-inflammatory action.
10	Rasna	<i>Alpinia galanga</i>	Post-operative anti-inflammatory action.
11	Erandmoola	<i>Ricinus communis</i>	Post-operative anti-inflammatory action.
12	Bhiringraja,	<i>Eclipta prostrata</i>	Post-operative anti-inflammatory action.
13	Parijata	<i>Nyctanthes arbor-tristis</i>	Post-operative anti-inflammatory action.
15	Shigru	<i>Moringa oleifera</i>	Post-operative anti-inflammatory action.

Important dates

- Introduction of I.P.P.V. endotracheal intubation (1910).
- Introduction of Portable ether inhaler in 1877 by Clover.
- Introduction of Lumber puncture by H.I. Quincke of Kiel in Germany and by Essex Wynter in England in 1891.
- Induction of successful spinal analgesia by Augustbier in 1898.
- Induction of extradural caudal injections by Sicard in 1901.
- Introduction of barbiturate in 1903 by Email Fischer and Van Mering of Munich. Introduction of laryngoscope and positive pressure respirators (1938 to 1943).
- Introduction of short acting muscle relaxant in 1949 (Paton and Zaimis).
- Introduction of 'Neuroleptic analgesia' by De Castro and Mundeleer in 1959. Introduction of Ketamine by Corssen and Domino in USA. Introduction of Critical Care Medicine in 1970.

DISCUSSION

Surgery of any kind involves pain unless the surgeon is able to conduct his operations painlessly, the patient cannot accept and suffer the pain. Now a day's anaesthesia is an expeditious growing branch in modern medical science. It has disseminated in various sub branches like intensive care unit, in pain management in different critically ill patients. We find the references of sangnaapanayana dravyas in Charaka and Madyenamohayitwaa (Induce anaesthesia with madya afore surgery). Except one or two references like this, all the operations

were being conducted by Ayurvedic surgeon by holding the patient either himself or with the avail of 4 or 5 attendants. This lacuna has led to non-practice of surgery by Ayurvedic surgeons. Still, there are certain researcher who could prove that there is a possibility of engendering Spinal anaesthesia with sarapunkha and local anaesthesia with Tagara but haplessly, these furnished by some Ayurvedic researcher have not been further ameliorated and marketed. Now if anybody takes up this project and discovers local and general anaesthesia on Ayurvedic lines; it could be a great contribution to Ayurvedic Surgery.

CONCLUSION

The Ayurvedic surgeons are still lacking to get an effective anaesthetic drug for use during surgery. The Ayurvedic drugs described here has only used for post-operative pain management; achieve tranquillity after surgery, and also post-operative pain management. Researcher and scientists should work extensively to find a potent Ayurvedic anaesthetic agent.

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