



**THE SURGICAL PERSPECTIVE OF AYURVEDA: SHALYA TANTRA & ITS  
ADVANCEMENT**

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**ABSTRACT**

The ayurveda traditional science of ancient medicine described *Shalya Tantra* as surgical science. The *Shalya karma* may be used in conditions such as; *Jalodar Baddhagudodar*, *Arsha*, *Mutravrudhi*, *Cchidrodar*, *Bhangandar*, *Mudhagarbha* and *Kaphaj-lingnas*. *Shalya tantra* is one of the eight branches of ayurveda which deals with the surgical and para-surgical approaches of treatment. *Shalya tantra* has been given prime importance since it offer *Aasu kriya karanaath* property, it encompasses basic principles of surgery such as; use of *Yantra Sashttra Kshara Agni pranidhaanat* and use of *Sarva tantra Saamanyat*. This review presents various ayurveda perspective of *Shalya Tantra* as a science of surgery.

**KEYWORDS:** Ayurveda, *Shalya karma*, *Shalya Tantra*, *Shastra karma*, Surgery.

**INTRODUCTION**

Ayurveda is a system of healthcare management offers various principles to maintain healthy well being. *Shalya Tantra* the science of surgery dealt with various invasive and non invasive approaches related to the operative procedure.<sup>[1]</sup> *Dhanvantari* defines terms *Yogya Shastra karma* means ability to practice well learned surgery and for this they prescribed practice of incision of *pushpaphala* & *Alabu* before performing actual surgery. Similarly ayurveda also suggests venesection practice on dead animals.<sup>[2]</sup> The terms *Paruschittas* described for dissector which means person possess ability to cut, open and rejoin body parts and scientists started this practice anciently. The surgical practice involves use of various instruments & materials which enable surgical practice to be more acceptable & advanced.<sup>[3]</sup> *Sushruta* and *Vagbhata* described many surgical instruments e.g., *Samdamsa Yantras*; *Simhamukha* and *Shararimukha*. As per ayurveda there are eight types of surgical procedures (*Ashtavidha Shastra karma*) used for various purposes like; incision, excision opening or taping a cavity, scraping, puncturing, probing and drainage of pus. This article presented ayurveda perspective of surgical approaches with its recent advancement.



**Figure 1: Ashtavidha Shastra karma (Eight surgical procedures) as per Ayurveda.**

**Trividha Shalya Karma**

As like other approaches of ayurveda *Shalya Tantra* also involve *Trividha* approaches of surgical practice which encompasses; *Purvakarma*, *Pradhana Karma* and *Paschat Karma*. The *Purvakarma* associated with factors which need to be handled before performing main operative procedure, *Pradhana Karma* involve various aspect of operative procedure while *Paschat Karma* dealt with post-operative consideration.<sup>[4]</sup>

➤ **Purvakarma**

Patient preparation, surgical guideline and arrangement of material to be used in operative procedure such as; *shalaka*, horns, leeches, *jambavoushta*, cotton, *sutra*, *ghee*, oils and *tarpan* etc.

- Sterilization is one of the important aspects of *Purvakarma* especially for *Thaila Paayana*, *Udaka Paayana* and *Kshara paayana*. *Agni tapta salaka* is one of the ancient utility of sterilization methods.
- Preparation of Patient is also considered under the heading of *Purvakarma* which generally involve diet suggestion for patient who is to be operated; light food is advised before minor operative procedure. However surgeries associated with *Moodha garbha*, *Udara*, *Arshas*, *Ashmari*, *Bhagandara* and *Mukha roga* are suggested in empty stomach.

➤ **Pradhana Karma**

This includes mainly *Ashtavidha Shastra karma* as mentioned in figure 1. *Pradhana Shalya Karma* involve following main operative procedure<sup>[5]</sup>

- *Chedana*: for diseases like; *Bhagandara*, *Granthi*, *Tilakalaka* and *Arbuda* (tumour).
- *Bhedana*: for diseases like; *Vidradhi*, *Granthi* and *Vruddhi*.
- *Lekhana*: for diseases like; *Upajihvika*.
- *Vyadhana*: for disease like; *Bahuvidha sira*, *Mootra vriddhi* and *Dakodaram*.
- *Esana*: indicated in sinuses and wounds.
- *Aharana*: indicated in *Ashmari*, *Danta mala*, *Karna mala* and *Moodha garbha*.
- *Visravana*: indicated in *Kushta*, *Ekadeshaja soph*a and *Palyamaya*.
- *Seevana*: indicated for *Medas* disorders, incised wounds and lesions.

Suturing is also an important procedure applied as ligation for the surgical cut. Suturing may be considered as *Pradhana Karma* & also as part of *Paschat Karma*. Suturing involve use of *sutra* (threads) made up of silk, cotton, jute, *Snayu*, etc. through needles applied to stitch cut or operated body parts.<sup>[6,7]</sup>

**The sutures may be various types as follows**

- *Rujugranthi*: Simple interrupted.
- *Anuvellita*: Simple continuous.
- *Gophanika*: Blanket sutures.
- *Tunna sevani*: Subcuticular.

➤ **Paschat Karma**

*Paschat Karma* considered post operative aspects; the operative area should be cleaned & dressed regularly with *Vikeshika* or with suggested formulations.<sup>[8]</sup> The ayurveda also suggests use of fumigation with antimicrobial medicines to avoid any chances of infections. The care towards the any chances of pus formation should be taken. The major surgical procedure involves patient care in *Vranitagara* for few days as per desired protocol. The fumigation of *Azadirachta indica* & *Ashtanga dhupas* also help to maintain aseptic condition this should be done as *Purvakarma* & *Paschat Karma*.<sup>[9]</sup>

**ADVANCEMENT OF AYURVEDA SURGERY<sup>[4-10]</sup>**

➤ **Nasa-Sandhana**

The *Nasa-Sandhana* means rhinoplasty is one of the advanced forms of ayurveda surgery however its initiation was well established by *Sushruta* and it is type of reconstructive surgeries and somewhat resembles plastic surgery of modern science. This mainly applied for *nasya Shalya*. The materials such as; *Pattanga* or *Rakta Chandana*, *Yastimadhu* and *Rasanjana* may be applied over the wound followed by cotton pad covering soaked in *Sesamum* oil.

➤ **Karna-Sandhana**

The *Sushruta* described reconstructive surgeries of ear lobules in different pathological conditions associated with congenital anomalies or trauma. The ayurveda text encompasses techniques to repair ear lobules as *Karna-Sandhana* by the flap of cheek.

➤ **Ostha Sandhana**

This involve repair of deformed lip as process used in *Nasa-Sandhana*. However due to the lack of detailed literature availability the *Ostha Sandhana* practicing rarely.

**Table 1: Unique surgical techniques as per ayurveda.**

S. No.	Surgical approaches	Uses
1	<i>Langalaka</i> , <i>Ardhalangalaka</i> and <i>Savatobhadra</i> ka	To remove the fistulous tract
2	Perineal lithotomy	To remove urinary stones
3	Exploration of abdomen	For <i>Baddha gudodara</i>
4	Exploration of abdomen	For <i>Chidrodara</i>
5	<i>Sandhana</i> , <i>Skandana</i> , <i>Dahana</i> & <i>Pachana</i>	To arrest bleeding

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