

SANDHANA KARMA AN ANCIENT CONCEPT OF RECONSTRUCTIVE AND COSMETIC SURGERY OF SHALYATANTRA

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ABSTRACT

Sandhan Karma is an age-old surgical method mentioned by *Acharya Sushruta* that bears a striking resemblance to contemporary plastic and reconstructive surgery. Numerous surgical diseases, their causes, classifications, prognoses and treatments thoroughly described in classic text of Ayurveda. *Sushruta* established a number of fundamental surgical concepts that still have an impact on contemporary procedures. The idea of *Shashti-Upakrama*, a collection of sixty therapeutic techniques for wound care, is one of them. *Sandhana* is the reunification of disparate body parts. *Sandhan Karma* has developed into sophisticated plastic and reconstructive surgical methods in modern medicine. Its roots lie in *Sushruta's* groundbreaking work in procedures like *Oshtha Sandhan*, *Karna Sandhan* and *Nasasandhan*. A thorough awareness of post-operative care, which is crucial for the success of any reconstructive treatment, is also shown in *Sushruta's* emphasis on appropriate wound healing. In order to make comparisons with contemporary plastic and reconstructive surgery, this article examines the concept of *Sandhan Upakrama* as described in Ayurvedic literatures.

KEYWORDS: *Ayurveda, Reconstructive, Sandhan Karma, Plastic Surgery, Shalyatantra.*

INTRODUCTION

Shalya Tantra is one of the eight main disciplines of Ayurveda which works around surgical health issues. Ancient Indian surgical techniques provide historical proof that a variety of intricate procedures were performed successfully. *Sushruta* distinguished between several types of surgical techniques, including *Vedhya*, *Bhedya* and *Chedya*. Additionally, *Sushruta* stressed that the most efficient instrument in any surgical process is the surgeon's hand. Repairing, reconstructing or replacing physical abnormalities that impact form or functions especially those affecting the face or other body parts is the specialty of plastic surgery.^[1-3]

Sushruta Samhita focuses mostly on surgical skills. It is noteworthy that the *Sushruta* describes extremely complicated surgical procedures like caesarean sections, prosthetic limb insertion, cataract extraction, fracture care and plastic or reconstructive operations. The plastic or reconstructive operation is described as *Sandhana Karma* in Ayurveda science. One of the earliest surgical techniques in the world is *Sushruta's Sandhan Karma*, which is the ancient counterpart of plastic and reconstructive surgery.

Plastic procedures such as *Karna Sandhan* and *Nasasandhan* are mentioned in the *Sutra Sthana*, of the *Sushruta Samhita*. In the past, these operations were created as corrective surgeries after war prisoners or disloyal people received punishments including amputation of the nose or ear lobes. To repair these deformities, surgeons of the time used reconstructive procedures.^[3-5]

Significance of Sandhana Karma

In the Ayurvedic surgical method, *Sandhana Karma* is essential, especially for tissue healing and repair. By inducing the renewal of injured tissues, it helps in tissue regeneration and the body's natural healing process. Reducing scarring is one of its noteworthy advantages, which improves recovery and restore beauty. Furthermore, by minimizing complications and enhancing other Ayurvedic treatments, *Sandhana Karma* promotes holistic healing and helps the afflicted area to return in normal function. It is frequently recommended for minor lacerations, which entail suturing tiny cuts and tears, and for cases like torn earlobe repair, where exact surgical reconstruction is necessary. Additionally, it

works well to close wounds, which is crucial for avoiding infections and hastening the healing process.^[4-6]

Procedural Protocol

The best possible healing, pre-operative preparations usually involve dietary and lifestyle changes. The actual technique starts with wound preparation, which entails thoroughly cleaning and preparing the afflicted area. Depending on the features of the wound, specialized suturing procedures are then used with specialized materials. Medicated herbal dressings are applied after suturing to promote healing and guard against infections.

In order to facilitate healing and lower the risk of recurrence, post-procedure care include dietary and lifestyle recommendations in addition to wound care

instructions. Regular follow-up meetings are planned in order to evaluate the healing process and modify the treatment plan as needed.

Karna Sandhana

Ayurveda and contemporary science suggested various types of *Sandhana* (**Figure 1**) for surgical and reconstructive interventions of ear (*Karna*). The shape, size and condition of the severed ear lobes determine which *Karna Sandhana* type is appropriate. When both lobe sections are heavy, broad and comparable in size and shape, *Nemi Sandhanka* is advised. When both pieces are the same size and shape, *Utpala Bhedyaka* works well. When the severed portions are small, spherical and symmetrical, *Vallooraka* is recommended.^[5-7]

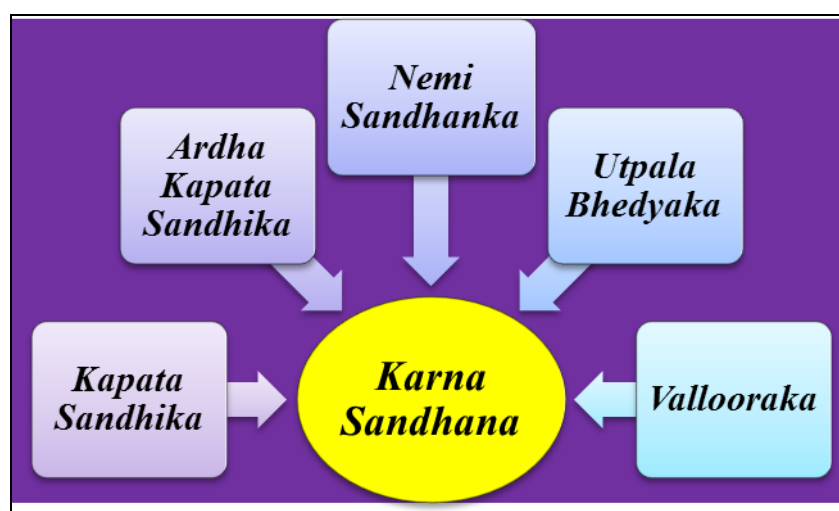


Figure 1: Some important types of Karna Sandhana.

Gandakarna is selected when the distal portion of the lobe is relatively larger, while *Aasangima* is indicated when the proximal segment is greater. *Aaharya* is the proper technique to use when both ear lobe segments are absent. The residual *Putrika* is used as the surgical base for *Nirvedhima* if the entire lobe, including its root, is missing. When the size of the two broken pieces is uneven or different, *Vyayojima* is utilized. When one fragment is shorter on the proximal side and the other is longer, *Kapata Sandhika* works well. Similarly, when the lobe's outside part is noticeably bigger than its inner part, *Ardha Kapata Sandhika* is suggested.

Nasasandhana Karma

Acharya Sushruta discusses reconstructive surgery for the nose after discussing ear reconstruction. When the nose is injured, diseased or traumatized, this surgery is recommended. First, a leaf is used to measure the damaged area. After that, a skin flap of the appropriate size is removed from the cheek or forehead, leaving it partially attached for blood flow. The skin flap is placed and sutured over the nasal stump's bare surface, which has been prepared by excision. During the healing process, two tubes made from the *Eranda* are placed into the nostrils to preserve the shape and provide ventilation.

Dusting the region with a mixture of *Lal Chandan*, *Mulethi* and *Rasot* promotes healing once the skin has been secured. After that, the area is covered with gauze or cotton, and to encourage healing, it is frequently soaked with sesame oil.

Oshtha Sandhana Karma

The same guidelines that apply to rhinoplasty are also applicable to reconstructive surgery for damaged lips or congenital cleft palates. But unlike nose repair, lip surgery does not necessitate the use of *Eranda naala*, or castor stem tubes. The term *Rajvaidya*, which means royal physician authorized to heal monarchs, was bestowed upon doctors skilled in such sophisticated reconstructive treatments.^[7-9]

Indications of Sandhana Karma

- ✓ *Karna Chhedana Sandhana*
- ✓ *Chinna & Bhinna Vrana*
- ✓ *Vidradhi Bhedana*
- ✓ *Shastra Kshata*
- ✓ Cosmetic Surgical Repair
- ✓ Rhinoplasty

Contraindications of Sandhana Karma

Sandhana Karma is contraindicated in several situations, nevertheless, such as when there are active infections in the treatment region, bleeding disorders, or certain medical conditions that could be dangerous or affect the procedure's outcome.^[8-10]

CONCLUSION

Shalya Tantra is one of the eight fundamental schools of Ayurveda, which has a prominent place in the history of surgical research. *Sandhana Karma*, the Ayurvedic counterpart of plastic and reconstructive surgery, is one of the many intricate surgical techniques covered in the *Sushruta Samhita*. It is an essential operation for tissue healing, cosmetic restoration, and functional recovery. Even in ancient times, techniques like *Karna Sandhana*, *Nasasandhana*, and *Oshtha Sandhana* were used to treat traumatic and post-punitive abnormalities. Sophisticated surgical techniques also emphasize Ayurveda's holistic approach, which incorporates individualized diagnosis, operative care and postoperative recuperation through the use of herbal medicines, dietary guidelines and lifestyle changes. With its tried-and-true, natural method of healing, *Sandhana Karma* is still useful today, particularly in the Ayurvedic treatment of cuts, surgical wounds and reconstructive requirements. Its contraindications, which include bleeding disorders and current infections, highlight how crucial a thorough patient examination is. *Sandhana Karma* bridges the gap between traditional knowledge and contemporary reconstructive concepts.

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