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Bloodless method of Auroplasty an Innovation to ancient method: A Case study

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Abstract

The ancient Indian medical text *Sushruta Samhita* describes various reconstructive surgical techniques, including *Karna Sandhana* (ear lobe repair), showcasing advanced surgical knowledge from as early as 600 B.C. With evolving surgical tools and aseptic practices, these principles are being revisited and adapted in modern minor surgeries.

To demonstrate the clinical effectiveness and practical application of a bloodless auriculoplasty technique inspired by the ancient *Karnapali Sandhana Vidhi* described by *Acharya Sushruta*.

A 50-year-old female patient presented with bilateral ear lobe tears, primarily due to prolonged use of heavy earrings. She exhibited no signs of infection or inflammation. Preoperative evaluation and basic investigations were within normal limits. A modern, minimally invasive surgical approach was adopted, employing intestinal clamps to control bleeding and ensure atraumatic handling of tissues.

Under local anaesthesia, the torn ear lobule was surgically repaired using clamps, sharp dissection, raw surface approximation, and fine suturing with Ethilon 3-0. The entire procedure followed a "bloodless" protocol with emphasis on precision and minimal tissue trauma.

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The patient experienced minimal discomfort post-operatively. Sutures were removed on the 10th day, revealing excellent healing, no signs of infection, and minimal scarring. The structural integrity and cosmetic appearance of the ear lobes were successfully restored.

This case highlights the successful integration of ancient Ayurvedic surgical principles with modern aseptic and surgical methods. The bloodless auriculoplasty technique is a safe, effective, and cosmetically sound procedure for minor reconstructive needs, reaffirming the timeless value of *Sushruta's* teachings in contemporary clinical practice.

Key words : *Karna Sandhana*, Auroplasty, Bloodless Surgery, Reconstructive Surgery.

The origins of plastic surgery in India can be traced back to the *Vedic* era. Ancient Vedic texts and rituals reflect that the concepts of plastic and reconstructive surgery were familiar to divine figures such as *Brahma*, *Vishnu*, *Maheshwara*, *Indra*, *Dhanvantari*, *Dadhichi*, and the *Ashwini Kumaras*. Notably, in the *Rigveda* (1-158; 4-6), it is mentioned that *Rishi Chyavan* was dismembered by Daksha, separating his head and torso. The *Ashwini Kumaras*, revered as celestial physicians, are said to have restored his life by skilfully reattaching the severed parts—an early reference to reconstructive surgical intervention[1].

During the Samhita period, the use of skin grafts for reconstructive procedures in ancient Indian surgery was recorded as early as 800 B.C. The *Sushruta Samhita*, dating back to around 600 B.C., provides the earliest detailed descriptions of transplantation techniques. Historical records suggest that during that era, rulers would often punish offenders or enemies by severing parts such as the nose, ears, or ear lobes[3]. Victims of such punishments would seek help from surgeons to restore these disfigured parts. Ancient Indian surgeons addressed these deformities by employing transposition techniques, using skin flaps to reconstruct structures like the nose and ear lobes.

The revival of this ancient practice was notably highlighted in 1794 through reports from India, including a detailed account of a rhinoplasty performed on a bullock cart driver named Cowasjee, which was later published in *The Gentleman's Magazine* in England. The foundational concepts outlined by Sushruta regarding reconstructive surgery further continued in the form of modern plastic surgery practices[2].

Additionally, ear piercing in children, done for both protective and ornamental purposes, was believed to ward off negative influences. However, over time, the prolonged use of heavy earrings often led to stretching, splitting, or tearing of the ear lobes. *Sushruta* addressed this issue in detail, outlining 15 distinct techniques for repairing torn ear lobes under the section known as *Karna Sandhana*[7].

The *Sushruta Samhita* outlines 15 distinct surgical techniques for the reconstruction and repair of ear deformities. These include: 1. *Nemi Sandhanaka*, 2. *Utpala Bhedyaka*,

3. *Valluraka*, 4. *Asangima*, 5. *Gandakarna*, 6. *Aharya*, 7. *Nirvedhima*, 8. *Vyayojima*, 9. *Kapata Sandhika*, 10. *Ardhakapata Sandhika*, 11. *Sanksipta*, 12. *Hinakarna*, 13. *Vallikarna*, 14. *Yasti Karna*, and 15. *Kakaustaka*.

These procedures were developed to correct a variety of ear defects, all guided by the fundamental principles of restoring:

a) Structural integrity (form),

b) Auditory and anatomical utility (function), and

c) Aesthetic appearance (cosmesis).

गण्डादुत्पाट्य मांसेन सानुबन्धेन जीवता | कर्णपालीमपालेस्तु कुर्यान्निर्लिख्य शास्त्रवित् || -Su. Su16/14

If the original ear lobule (*Karnapali*) is not available for the reconstructive procedure (*Sandhana Karma*), then a pedicled skin flap should be taken from the cheek (*Ganda Pradesh*) with its base remaining attached (to preserve blood supply). After preparing the recipient site by scraping it (*Lekhana Karma*), the lobule (*Pali*) should be reconstructed at the desired location[10].

Remarkably, these foundational objectives remain central to modern plastic and reconstructive surgical practices.

According to *Acharya Sushruta* method of repair torn Ear lobule,

बाह्यायामिह दीर्घायां सन्धिराभ्यन्तरो भवेत् |आभ्यन्तरायां दीर्घायां बाह्यसन्धिरुदाहृतः || एकैव तु भवेत् पालिः स्थूला पृथ्वी स्थिरा च या | तां द्विधा पाटयित्वा तु छित्त्वा चोपरि सन्धयेत् ||

-- (Su.Su.16/12-13)

If the tissue is broad and immobile, it should be carefully separated, reshaped, and then reattached to the upper segment[9]. This method is currently employed by modern plastic surgeons and is referred to as the Y-V repair technique[8].

Case Study :

A 50yr/F IT Profession came to *Shalakya* Tantra OPD on 16/04/2025 with the complaint of left Ear Lobule tear.

History of Present illness :

A 50yr/F Apparantely well before 3 years after that due to heavy ornament (Ear rings) wearing gradually tearing of left ear lobe. Patient doesn't feel any pain or swelling at left ear lobe. For above complaint patient visited to Khemdas hospital for further evaluation.

Vayaktik Vruttant:

- Ahara: Mixed
- Vihara: Sedentary
- Mutra: 4-5 times/day
- Mala: 1 time/day

Astavidh Pariksha:

Nadi	Vata Pradhan Pitta Anubandhi	Shabd	Prakrut
Mutra	4-5 times/day	Sparsha	Prakrut
Mala	1 time/day	Drika	Prakrut
Jivha	Niram	Akriti	Madhyam

Samanya Pariksha :

Appearance: Normal
Temp: 97.6°
BP: 120/70 mm of hg
Pulse: 86/min
SpO_2: 98%
Built: Medium

Pallor & Icterus: Absent
O/E:
RS: AEBE Clear
CVS: S_1S_2 Heard
CNS: Patient is conscious & oriented to time, place and person.
GI: Soft

Investigation :

Date: 22/04/2025

CBC:	
HB	12.4%
WBC	8000/cmm
RBC	4.58 mill/cmm
PCV	34.6 %
MCV	75.7 fL
MCH	28 pg
MCHC	34.2
Platelet count	2,68,000 /cmm
DLC	
Polymorph	65 %
Lymphocytes	30 %
Eosionophils	01 %
Monocytes	04 %
Basophils	00 %
BT: - 2:30 min	CT: - 4:30 min

Blood Urea	20 mg/dl
RBS	125 mg/dl
HbA_1C	4.5
HIV	Non-Reactive
HBV	Non-Reactive
VDRL	Non-Reactive
Sr Electrolyte	
Sodium	140 meq/l
Pottasium	390 meq/l
Sr. Creatinine	0.7 mg/dl

Local Examination Left ear:

- Site: Lobuar Region
- No pain, Tenderness swelling and Redness
- Discharge: absent
- Bleeding: absent
- Tear in the left ear: 1.5 cm linear

Procedure of Auroplasty (Karn sandhan Vidhi)[5]*:*

- *Pre Operative Procedure :*

1. Fitness Taken
2. Written consent Should be taken
3. Inj. Xylocaine sensitivity test done
4. Inj. T.T 0.5 cc IM given
5. Preparation of Part

- *Operative procedure :*

1. Under all aseptic measure patient shifted to OT.
2. Part prepared painted and draped.
3. Put cotton ball in ear so that fluids do not enter the ear canal.
4. With 26 No. 1½ inch needle gives

Anesthesia using Plane Xylocain 2%.

5. Pass the needle carefully parallel to the slit.
6. The needle should go in the ear lobule from downwards up to the inter-tragic notch but should not puncture the skin. Push the drug gently while with drawing the needle slowly. The lobule will swell due to the drug. Do same thing on the other side of the slit. Now the whole ear lobule will swell due to the drug.
7. Rub with gauze piece for even distribution of the drug.
8. Then apply the Intestinal clamps 5-7mm away and parallel to the slit on both the sides.
9. The clamps should be applied with a single click.
10. This will hold the ear lobule gently but firmly and control the bleeding very nicely.
11. Then cut the connection with blade no11. Now ask your assistant to hold the intestinal clamps a little wide. Now give incision on the skin inside the defect with the tip of blade No 11.
12. Cut the margins of the skin with sharp straight pointed scissors (Tenotomy scissors).
13. Scrap well the raw surface with the edge of the blade for better union. Apply some betadine. Then mop it.
14. Bring both the intestinal clamps close to each other. This will facilitate the suturing.
15. Give the first stich at lower end with Ethilon 3-0 or 4-0. This will approximate the lower end of the defect.
16. Then suture on the lateral side.
17. Take 5mm bite while taking the suture.
18. Distance between two stitches should be 5 to 6 mm.
19. Then ask the assistant to reverse the clamps together so that the medial side can be sutured.
20. After suturing both sides, clean the site gently with betadine and spirit. Remove the intestinal clamps.
21. Wrap well with 1 or 2 more gauze pieces and apply paper sticking. Take care of ventilation of the wound.

- *Post operative procedure :*

1. Tab. Zifi-CV 375mg 1 BD after food for 5 days.
2. Tab. Paracetamol 500 mg BD after food for 5 days.
3. Tab. Becozyme C forte 1 BD after food for 5 days.
4. Tab. Triphala guggulu (2-0-2 After food) for 15 days.
5. Tila Taila Locally Apply for 15 Days.

Follow Up: 3rd day, 7th day, 15th Day

Findings :

Mild post-op inconvinence/ mild pain for 1-2 days after Sandhana karma
No Infection noted
On 10th Day Stiches Removed
Good post-op healing, no any discharge or infection noticed
Very minimal scar is noticed

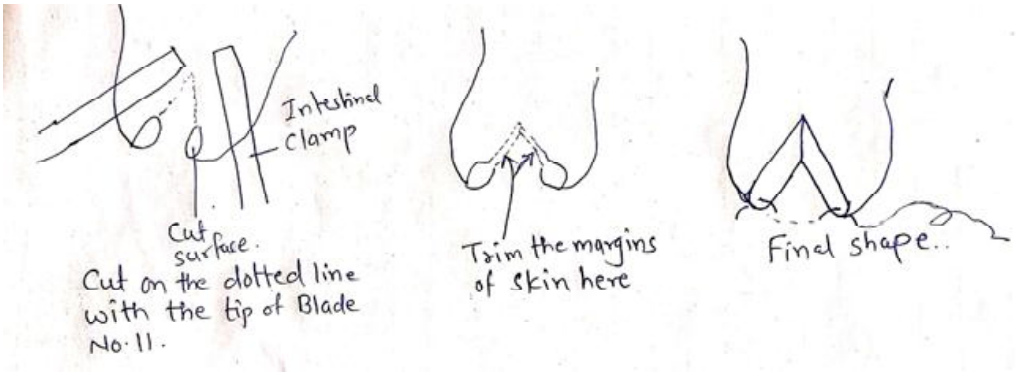
The earlobes, particularly in individuals who wear heavy ornaments over prolonged periods, often become elongated, split, or torn due to the continuous mechanical stress[6]. In the *Sushruta Samhita*, *Acharya Sushruta*, the father of ancient surgery, meticulously described 15 distinct techniques for reconstructive ear surgery

(*Karna Sandhana*) as mentioned above.

Among these, *Utpalabhedyaka* and *Nemi Sandhanaka* are the prominent procedures employed in *Karna Bhanda* (ear lobe repair). In these methods, *Sushruta* emphasized meticulous surgical steps—elevating the wound margins, precisely aligning the skin flaps, scrapping beforehand, and performing delicate suturing using fine thread, which in ancient times was often natural fiber like *Ashmantaka* (plant fiber)[4]. In modern surgical practice, similar principles are followed. However, instead of *Ashmantaka* sutures, materials such as Ethilon (non-absorbable nylon) are used for finer and more durable closures. Post-operative care, too, finds its roots in Sushruta's teachings. He advocated irrigating the wound site with freshly extracted sesame oil (Tila Taila) for its *Vranaropaka* (wound healing) and *Shothahara* (anti-inflammatory) properties. Sushruta emphasized the need for changing dressings periodically—every third day—to prevent infection and promote healing. This principle is consistent with modern aseptic wound management, where wound hygiene and dressing frequency are critical aspects[5].

Application of clamps

Reversal of clamps to suture medially



This case was successfully managed using a bloodless method of auriculoplasty, closely aligning with the principles described by *Acharya Sushruta* in the *Karnapali Sandhana* Vidhi (earlobe reconstruction technique). The approach involved a harmonious integration of ancient surgical wisdom and modern refinements, highlighting the timeless relevance of Ayurvedic surgical practices. The procedure not only adhered to Sushruta's foundational steps—such as precise incision, minimal trauma, atraumatic tissue handling, and wound edge approximation. The successful outcome of this case reaffirms that Sushruta's techniques are not merely historical references, but practically applicable methods in today's clinical settings when adapted thoughtfully. The "healing touch" of Ayurveda, when blended with modern surgical tools and sterile techniques, offers a safe, effective, and patient -friendly approach to reconstructive surgery. This case stands as a testimony to the enduring legacy of Ayurvedic Shalya Tantra, underscoring its capability to meet modern surgical demands while preserving its holistic essence.

References :

1. Griffith RL. (1973). *The Rigveda : The Sacred Hymns of the Brahmans*. 2nd ed. Delhi: Motilal Banarsidass; Rigveda *1*.158; 4.6.
2. Mukhopadhyaya G.(1913). *The Surgical Instruments of the Hindus, with a comparative study of the surgical instruments of the Greek, Roman, Arab and the modern European surgeons*. Vol. 1. Calcutta: Calcutta University Press; p. 50–55.
3. Sharma PV, (2001). Editor. *Sushruta Samhita: With English Translation of Text and Dalhana's Commentary Along with Critical Notes*. Vol. 1. Varanasi: Chowkhamba Vishwabharati; Susrut Sutrasthan 16th adhyay, p. 118–121.
4. Sharma PV, (2001). Editor. *Sushruta Samhita*. Varanasi: Chaukhamba Vishwabharati; Sutrasthana, Ch. 16, p. 118–122.
5. Sharma PV, (2001).Editor. *Sushruta Samhita*. Varanasi: Chaukhamba Vishwabharati; Sutrasthana, Ch. 20, p. 157–160.
6. Sriram Bhat M. (2019). *SRB Manual of Surgery*. 6th ed. New Delhi: Jaypee Brothers Medical Publishers.
7. Sushruta Samhita. (2022). Sharma PV, Hindi translator; Sharma A, editor. Varanasi: Chaukhamba Subharti Prakashan. Sutrasthan Adhyay 16, Shloka 9, p. 134.
8. Sushruta Samhita. (2022). Sharma PV, Hindi translator; Sharma A, editor. Varanasi: Chaukhamba Subharti Prakashan; Sutrasthan Adhyay 16, Shloka 12–13, p. 136.
9. Sushruta Samhita.(2022). Sharma PV, Hindi translator; Sharma A, editor. Varanasi: Chaukhamba Subharti Prakashan; Sutrasthan Adhyay 16, Shloka 14, p. 136.
10. Thorne CH, (2007). editor. *Grabb and Smith's Plastic Surgery*. 6th ed. Philadelphia: Lippincott Williams & Wilkins; Chapter 30, Otoplasty and ear reconstruction.