

**When Breathing Meets Beauty: A Rhinoplasty Case Exploration**

<sup>1</sup>Dr. Sunil Vasudev, HOD, Department of Oral and Maxillofacial Surgery, DAPM RV Dental College, Bengaluru, Karnataka.

<sup>2</sup>Dr Praveena A, 3rd Year Post Graduate, Department of Oral and Maxillofacial Surgery, DAPM RV Dental College, Bengaluru, Karnataka.

<sup>3</sup>Dr Sarayu Gopal, Senior Lecturer, Department of Oral and Maxillofacial Surgery, DAPM RV Dental College, Bengaluru, Karnataka.

<sup>4</sup>Dr Harish L R, 1st Year Post Graduate, Department of Oral and Maxillofacial Surgery, DAPM RV Dental College, Bengaluru, Karnataka.

**Corresponding Author:** Dr. Sunil Vasudev, HOD, Department of Oral and Maxillofacial Surgery, DAPM RV Dental College, Bengaluru, Karnataka.

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**Abstract**

Rhinoplasty, encompassing both aesthetic and functional objectives, remains one of the most frequently performed procedures in facial plastic surgery. Despite its prevalence, the complexity of nasal anatomy and individual patient variations necessitate a tailored surgical approach to achieve optimal outcomes. We present the case of a 28-year-old male patient who underwent rhinoplasty to address a prominent dorsal hump and moderate nasal tip ptosis. Surgical planning involved dorsal hump reduction, tip refinement and columellar strut placement to enhance tip projection and support. This article also underscores the importance of a comprehensive preoperative assessment and individualized surgical planning in rhinoplasty.

**Keywords:** Deformities, Local Anaesthesia Nasal Tip, Rhinoplasty.

**Introduction**

Rhinoplasty is a complex surgical procedure that serves both aesthetic and functional purposes by reshaping the nose while ensuring proper nasal airflow. This operation is often sought to correct congenital anomalies, trauma-related deformities, or purely cosmetic concerns. The nose, positioned centrally on the face, plays a crucial role in facial symmetry and expression, making rhinoplasty a delicate balance between art and science (Guyuron et al., 2016).

Successful outcomes depend on a thorough preoperative assessment that includes evaluating nasal anatomy, skin quality, airway function, and the patient’s expectations.

Functional considerations, such as septal deviation or nasal valve collapse, must be addressed to prevent or relieve obstruction while simultaneously enhancing nasal contour (Rohrich & Ahmad, 2011). Achieving harmony between the internal nasal structures and the external nasal shape requires careful surgical planning and precise technique.

This clinical report discusses a rhinoplasty case focusing on the integration of form and function. It highlights the surgical approach, intraoperative decision-making, and postoperative management aimed at restoring nasal breathing and achieving facial balance. The case exemplifies how breathing and beauty are intimately connected in rhinoplasty, demanding a holistic and patient-centered approach.

### Case Report

A 22-year-old male patient presented to our department with a chief complaint of asymmetric nose with bulge on the nasal bridge and drooping of his nasal tip. The patient reported no nasal blockage or any other associated symptoms. There was no history of any underlying medical condition.

On Examination (FIG-1, 2)

- No gross facial asymmetry noted.
- TMJ movements satisfactory.
- Dorsal hump noted over the nasal bridge.
- Drooping of the nasal tip noted.
- No deviated nasal septum noted.



Figure 1: Pre Op Profile



Figure 2: Pre Op Lateral

In FIG 2 the arrow marks points at the nasal hump and drooping of nasal tip.

After basic blood investigations, patient was taken under general anesthesia for the procedure.

### Procedure

- General anesthesia was achieved using oral intubation.
- Painting and draping done using standard aseptic protocols.
- Local anaesthesia with 2% lignocaine without adrenaline was administered to the proposed surgical site.
- Inverted V shaped marking was done on columella and incision placed from columella extending bilaterally to the Ala.(FIG-3)



Figure 3: Inverted V shaped marking and incision placed on columella

- Blunt dissection of soft tissue done, Alar cartilage and lateral cartilage was exposed and nasal hump reduced. (FIG-4)

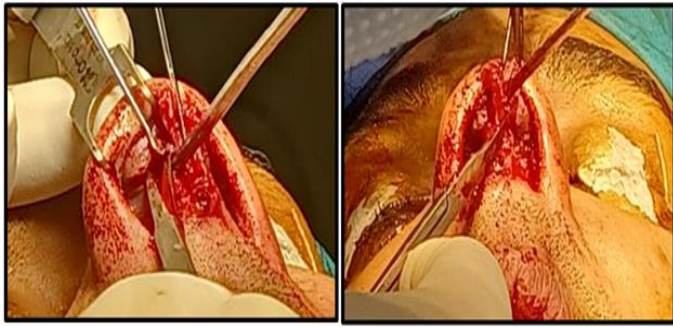


Figure 4: Blunt dissection of soft tissue and exposure of nasal cartilage and nasal hump reduced using double ended bone file

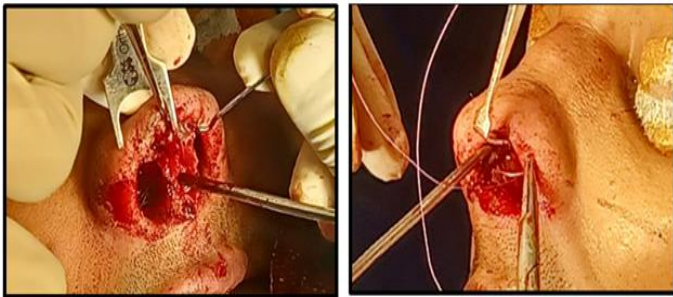


Figure 5: Placement of nasal strut (removed from dorsal cartilage) on the tip to correct the nasal tip drooping and subsequent closure

- The nasal strut was stabilized and closure achieved using 4-0 vicryl.
- Nasal Packs with Airway Tubes placed bilaterally.
- Rigid nasal splint was placed externally.
- Patient was extubated and shifted to the post-operative ICU where he was under observation for a period of 6 hours post which patient was shifted to ward.
- In the immediate post-operative period, patient was closely monitored for any excessive bleeding from the operated site.

The patient had an uneventful post-operative period with satisfactory healing. Patient was followed up for every week in 1<sup>st</sup> month and every 2 weeks in 2<sup>nd</sup> month and once in 3<sup>rd</sup> month. No signs of pus discharge, tenderness or nasal blockage noted.



Figure 6: Post Op 4 Months - Worms View



Figure 7: Pre Op and Post Op Lateral View

The FIG 7 provides a pre and post operative comparison, the arrow marks points at the reduction of nasal hump and elimination of nasal drooping.

### Discussion

Rhinoplasty, the surgical alteration of the nose, boasts a rich history that spans over two millennia, evolving from rudimentary reconstructive techniques to sophisticated aesthetic procedures.

The earliest documented practice of rhinoplasty dates back to ancient India around 600 BCE, as described in the Sushruta Samhita. Sushruta, often hailed as the "father of surgery," detailed methods for reconstructing noses using flaps of skin from the forehead, a technique that laid the foundation for modern reconstructive surgery.

This knowledge permeated the Middle East during the Islamic Golden Age, where scholars like Avicenna expanded upon surgical techniques. In Renaissance Italy, Gaspare Tagliacozzi further advanced rhinoplasty by

employing skin grafts from the upper arm, marking a significant step towards more refined surgical practices

The 19th century witnessed significant strides in rhinoplasty. In 1887, John Orlando Roe performed the first documented intranasal rhinoplasty in the United States, focusing on correcting nasal deformities without external incisions. This period also saw the introduction of anesthesia, enhancing patient comfort and expanding surgical possibilities.

The 20th century ushered in a new era with the advent of aesthetic rhinoplasty. Surgeons like Jacques Joseph refined techniques for cosmetic nasal reshaping, emphasizing the importance of preserving nasal function while enhancing appearance. The development of open and closed surgical approaches allowed for greater precision and customization.

Today, rhinoplasty continues to evolve with advancements in technology and technique. The integration of 3D imaging and computer-aided design has revolutionized surgical planning, enabling personalized outcomes. Additionally, non-surgical options like liquid rhinoplasty offer temporary solutions for those seeking subtle enhancements without the need for invasive procedures.

Rhinoplasty can be performed using two primary techniques: open and closed rhinoplasty. The choice between these approaches depends on the specific goals of the surgery, the complexity of the nasal issues, and the surgeon's expertise.

Open rhinoplasty involves an external incision made across the columella allowing the surgeon to lift the nasal skin and gain direct access to the underlying structures. This approach offers several advantages such as Enhanced Visibility: The external incision provides a clear view of the nasal anatomy, enabling precise modifications, especially in complex cases. Greater

Precision: Surgeons can perform detailed reshaping and structural changes, such as graft placements, with improved accuracy. Ideal for Complex Cases: Open rhinoplasty is preferred for revision surgeries, significant deformities, or functional corrections like septal repairs.

However, open rhinoplasty also has some drawbacks like Visible Scarring: The external incision may leave a small scar at the base of the nose, which can be noticeable in certain individuals. Longer Recovery Time: The procedure typically involves more swelling and bruising, leading to a longer healing period.

Closed rhinoplasty, also known as endonasal rhinoplasty, involves making incisions entirely within the nostrils, leaving no external scars. This technique offers several benefits such as No External Scarring: Since all incisions are internal, there are no visible scars, which is a significant cosmetic advantage. Shorter Recovery Time: Patients often experience less swelling and bruising, leading to a quicker recovery period. Less Invasive: The procedure is generally less invasive, with a reduced risk of complications. Despite its advantages, closed rhinoplasty has some limitations: Limited Visibility: The surgeon has less direct access to the nasal structures, making complex alterations more challenging. Restricted Surgical Maneuvers: Certain procedures, such as extensive tip refinement or the use of cartilage grafts, may be more difficult to perform. Potential for Nasal Valve Collapse: In some cases, the technique may not provide sufficient support to the nasal valve, potentially leading to breathing issues.

The decision between open and closed rhinoplasty depends on various factors, including the nature of the nasal issue, the desired outcomes, and the surgeon's expertise. For complex or revision cases requiring detailed structural changes, open rhinoplasty may be the preferred approach. Conversely, for patients seeking

subtle aesthetic enhancements with minimal recovery time, closed rhinoplasty may be more suitable.

Minimally invasive techniques, such as nonsurgical rhinoplasty using hyaluronic acid fillers, offer patients the opportunity to achieve subtle enhancements with reduced downtime. While these procedures boast high patient satisfaction rates, they are not without risks, including potential vascular complications. Therefore, a thorough understanding of nasal anatomy and meticulous technique are paramount to ensure safety and efficacy.

The success of rhinoplasty begins with a thorough preoperative evaluation. This includes a detailed medical history, physical examination, and imaging studies to assess the nasal structures. Patients are counseled on realistic expectations, potential risks, and the surgical plan. Preoperative instructions often involve avoiding certain medications and substances that may increase bleeding risk, as well as guidelines on fasting before surgery. At the same time, Postoperative management is also crucial for optimal recovery and outcome. Patients are typically instructed to keep their head elevated, apply cool compresses to reduce swelling, and avoid strenuous activities. Follow-up visits are essential to monitor healing, remove any splints or sutures, and address any concerns. In some cases, corticosteroid injections may be used to manage persistent swelling or scarring.

The outcomes of rhinoplasty are generally favorable, with many patients experiencing improved nasal appearance and function. Studies have shown significant improvements in patient satisfaction and quality of life following the procedure. However, as with any surgery, there are potential risks and complications, including infection, bleeding, scarring, and the need for revision surgery. Long-term results are typically stable, but factors such as aging and trauma can affect the appearance of the nose over time.

## **Conclusion**

Rhinoplasty has evolved into a sophisticated surgical discipline that harmonizes aesthetic aspirations with functional restoration. In the contemporary landscape, the procedure has transcended its traditional boundaries, embracing technological advancements and refined techniques to achieve outcomes that are both natural and enduring.

The integration of digital imaging and 3D modeling has revolutionized preoperative planning, allowing for precise simulations of surgical outcomes and enhancing patient-surgeon communication. These innovations facilitate tailored approaches that respect individual anatomical nuances, leading to more predictable and satisfactory results.

In our rhinoplasty case, we successfully achieved nasal symmetry by addressing both the dorsal hump and tip ptosis. The dorsal hump was reduced using a combination of osteotomies and rasping techniques, which allowed for precise contouring of the nasal dorsum. Simultaneously, the ptotic nasal tip was elevated. This comprehensive approach not only enhanced the aesthetic appearance of the nose but also preserved its functional integrity, ensuring that the patient maintained optimal nasal airflow postoperatively.

## **References**

1. Patel PN, Abdelwahab M, Most SP. A review and modification of dorsal preservation rhinoplasty techniques. *Facial Plast Surg Aesthet Med.* 2020;22(2):71–9.
2. Ferreira MG, Santos M, Carmo DO, et al. Spare roof technique versus component dorsal hump reduction: a randomized prospective study in 250 primary rhinoplasties, aesthetic and functional outcomes. *Aesthet Surg J.* 2021;41(3):288–300.

3. Abdelwahab MA, Neves CA, Patel PN, Most SP. Impact of dorsal preservation rhinoplasty versus dorsal hump resection on the internal nasal valve: a quantitative radiological study. *Aesthet Plast Surg.* 2020;44(3):879–87.
4. Tuncel U, Kurt A, Saban Y. Dorsal preservation surgery: a novel modification for dorsal shaping and hump reduction. *Aesthet Surg J.* 2022;42(11):1252–61.
5. Stergiou G, Tremp M, Finocchi V, Saban Y. Functional and radiological assessment after preservation rhinoplasty—a clinical study. *In Vivo.* 2020;34(5):2659–65.
6. Levin M, Ziai H, Roskies M. Patient satisfaction following structural versus preservation rhinoplasty: a systematic review. *Facial Plast Surg.* 2020;36(6):670–8.
7. Burks CA, Weitzman RE, Lindsay RW. The impact of component dorsal hump reduction on patient-perceived nasal aesthetics and obstruction in rhinoplasty. *Laryngoscope.* 2022;132(11):2157–61.
8. Patel PN, Abdelwahab M, Most SP. Matched cohort comparison of dorsal preservation and conventional hump resection rhinoplasty. *Aesthet Plast Surg.* 2023;47(3):1119–29.
9. Abdelwahab MA, Neves CA, Patel PN, Most SP. Impact of dorsal preservation rhinoplasty versus dorsal hump resection on the internal nasal valve: a quantitative radiological study. *Aesthetic Plast Surg.* 2020;44(3):879–87.
10. Tugrul S, Dogan R, Kocak I, Eren SB, Ozturan O. Split cartilage resection of nasal dome: A solution to ptotic nasal tips. *J Craniofac Surg.* 2015 Jul;26(5):e400–5.
11. Guyuron, B., Azizzadeh, B., & Biggs, T. M. (2016). *Rhinoplasty: Contemporary surgical art.* Elsevier Health Sciences.
12. Rohrich, R. J., & Ahmad, J. (2011). *Rhinoplasty: Navigating the internal and external nose.* *Plastic and Reconstructive Surgery*, 128(2), 747–766.