

# A single centre retrospective case series of septorhinoplasty for crooked nose deformity

## Abstract

The demand for septorhinoplasty surgeries has increased over the past two decades due to increased personal interest, awareness and advances in surgical techniques. Along with the evolution of improved techniques and better surgical modalities, this surgery has been growing in panorama including its indications, needs and techniques.

**Objective of the study:** To analyze all the patients who underwent septorhinoplasty surgeries from the period February 2024 till October 2025 by our senior author.

**Study design:** A retrospective observational study was conducted at this hospital with approval from the departmental head.

**Setting:** All patients underwent septorhinoplasty surgery at our secondary care center.

**Materials and methods:** We included all cases operated between February 2024 and October 2025 by our senior author in the manuscript. We reviewed their presentations, investigations, preoperative counselling, operative details and postoperative clinical records to audit our results and hence to document our experience in septorhinoplasties. A total of 30 patients have undergone this surgery during the above time period.

The most common reason for disfigurement was sports-related injury.

All patients received detailed preoperative counselling. An informed consent regarding the surgical procedure, postoperative complications, revision surgeries and postoperative care was obtained. Permission was obtained for taking photos during the preoperative, intraoperative and postoperative time.

**Outcome and results:** All the patients were followed up for 6 months to 1 year after surgery. No major postoperative complications were noted in these cases. 27 patients were satisfied with the results and 3 required revision surgeries. Four cases required costal cartilage grafts for augmentation. Two cases were revision septorhinoplasty procedures.

**Conclusion:** Septorhinoplasty is a delicate procedure and has greater aesthetic implications in planning surgical techniques and approaches. For better satisfaction of patients, adequate preoperative counselling and realistic expectations are warranted. Skillful surgical techniques lessen chances of complications.

**Keywords:** septorhinoplasty, retrospective observational study, sports injury, costal cartilage grafts, postoperative follow up.

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## Introduction

Septorhinoplasty is a surgical procedure designed to enhance both the function and form of the nose. It involves precise alterations that can have significant long-term implications. Open septorhinoplasty has two big goals.

First, it makes breathing easier by fixing the internal structure of the nose. Second it changes the shape of the nose close to your expectations. Among aesthetic surgical procedures, rhinoplasty is one of the oldest surgical procedures in history. The origins may be traced to the works of Sushruta Samhita in the Indian subcontinent, who is considered as the father of the rhinoplasty surgery in the world.

Detailed knowledge of the intricacies of nasal anatomy, analysis of the anatomy including its variations and goal directed surgical planning for each individual case are key to successful rhinoplasty. Detailed analysis should include individual consideration of skin and soft tissues, nasal bones and bony alterations. Facial muscular attachments, septum, lower and upper lateral cartilages, turbinates, internal and external nasal valves and adequacy of nasal airway.

Detailed counselling of the patient in terms of realistic expectations, outcomes, and possible complications is an integral part of any rhinoplasty procedure. It should be associated with detailed photographic documentation and evaluation, including right and left lateral and oblique views, as well as anterior, inferior, and superior views for analyzing the target, outcomes and for discussing the surgical and aesthetic issues with the patient.

We at our secondary care institute tried to collect the data from patients who underwent septorhinoplasty during a specified period, evaluate the outcome of cases in order to analyze our experience in this article.

## Materials and methods

We collected retrospectively details of all patients who underwent septorhinoplasty from February 2024 till October 2025, done by our senior author from the computer records with their hospital IDs. Detailed history regarding the type of nasal trauma, any previous surgery to the nose were noted in the records. Preoperative photographs of the patient, anterior, superior, basal and right and left

oblique views were taken for all individuals. Blood investigations, pre-anesthetic checkup details were documented. Detailed informed consent Table 1 was obtained from all the patients. This consent form was also translated in Arabic language, their native language so that the patients can understand all details of the surgical procedure prior to surgery. In open rhinoplasty inverted 'v' shaped incision is used in all cases. Costal cartilage graft was taken in 4 cases.

Osteotomies were performed in most cases. Alar correction and tip correction were performed in selected cases. Postoperatively after one week, sutures and internal nasal splints were removed and external nasal splint kept for 2 weeks after surgery. Postoperative photographs were taken at 2 weeks, 1 month, 3 months and 6 months for all patients with their informed consent for evaluation and academic purposes.

## Results

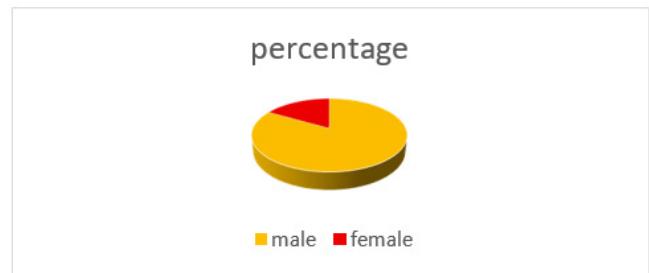
A total of 30 patients underwent surgery during the study period from February 2024 till October 2025 by our senior author. Of these, 25 were males and 5 were females. The common age group was found in between 21 to 40 years. The most common reason for this surgery was due to nasal trauma due to sports injuries. The majority of patients in this group had a crooked nose with multiple deformities. All these patients underwent an open approach (Table 1&2).

**Table 1** Informed consent format

**Table 1** Age group distribution of the patients operated

| less than 20 yrs |        | 21-30yrs |        | 31-40yrs |        | Greater than 40yrs |        |
|------------------|--------|----------|--------|----------|--------|--------------------|--------|
| Male             | Female | male     | female | Male     | Female | male               | female |
| 6                | 1      | 9        | 2      | 9        | 2      | 1                  | 0      |

**Table 2** Gender distribution of the patients operated



There were no major postoperative complications noted in our study. Though some patients developed periorbital edema and ecchymosis after surgery and resolved on its own after around 2 weeks after surgery.

4 patients required costal cartilage grafts for reconstruction. 2 out of 30 patients were revision septorhinoplasties.

3 patients required revision surgeries. Of which 1 did revision surgery in our center, other 2 are still waiting for operation theatre slot availability.

Patient satisfaction levels from the procedures were routinely documented in the postop visits. Standardized photographic assessment with their informed consent was done at every 2 weeks, 1 month, 3 month and 6 months post-surgery. Patients mentioned good satisfactory outcome of their surgery in 27 cases. 3 out of 30 patients were not satisfied and required revision surgeries.

Figures 1-4 are the preop and Figures 1a-4a are the postop pictures of few of the patients who underwent septorhinoplasty in this center.



**Figure 1** Preop.



**Figure 1a** Postop.

**Figure 2** Preop.**Figure 2a** Postop.**Figure 3** Preop.**Figure 3a** Postop.**Figure 4** Preop.**Figure 4a** Postop

Figure 5 shows the harvesting of costal cartilage graft which is used for 4 patients for augmentation rhinoplasty.

**Figure 5** Harvesting costal cartilage graft.

## Discussion

Rhinoplasty is indicated in deformities of the nose for both functional and cosmetic purposes. Many patients with cosmetic nasal deformities are conscious about their appearances and seek aesthetic improvement due to increasing social pressures and fast changing social patterns. Although rhinoplasty is a common procedure, it involves delicate and detailed surgery planning as this surgery and anatomical and aesthetic details play a major role in the facial appearance of a person.

Open approach rhinoplasty has more advantage than closed ones as there is good exposure, easy suturing and avoidance of distortion of anatomy for planning the reconstruction although the chances of trans columellar scarring, increased chance of postop edema in the tip and dorsum of nose cannot be ignored. Osteotomies can

lead to periorbital ecchymosis and swelling which usually takes few weeks to settle. Precise techniques do help in making any scarring unnoticeable.

Not only the nasal skeleton, but also the quality of the skin over the nose also has an impact on the surgical outcome. In our setting, we predominantly aim for functional rhinoplasty rather than aesthetic outcomes. Postoperatively regular follow up was given to all the patients. Suture removal was done after 1 week and external nasal splint removal was done after two weeks. 27 out of 30 patients were satisfied with our results, though 3 required revision surgeries.

Septorhinoplasties were introduced first at this center in 2020, but only a few cases were done till 2024. From 2024 onwards we regularly started doing this surgery and now we can see an increasing interest in patients to opt for this.

A good sample size and a longer period of study is needed to bring significant results for this study. There was no objective outcome assessment for this study. 2 patients in our study was not satisfied with their external shape where there was a slight depression in the dorsum of nose at the osteotomy site and 1 patient had nasal block after surgery. Revision surgeries were planned for these 3 patients, of which the patient with nasal block underwent revision surgery and nasal airway was improved by inferior turbinate reduction and mild septal correction. The other two patients are still waiting for correction. However, 27 patients in our study were satisfied with their results, regarding both their external appearance and nasal airway which improved with the surgery.

## Conclusion

In this article we presented our experience with septorhinoplasty surgeries in the past one and half years. Septorhinoplasty is an aesthetic and functional procedure involving finer surgical details and requires good surgical skills and planning. It is one of the most common facial plastic procedures. Otorhinolaryngologists have detailed knowledge of the nasal anatomy, physiological dynamics and therefore should consider these aspects while doing the surgical procedure along with addressing the needs of the patient. There are few published articles on septorhinoplasties from an otolaryngologist's perspective, hence this article may benefit in future to bring out more articles with good sample size, surgical experiences and proper outcome measurement. This study includes a small sample size as we have limitations to conduct these surgeries in a secondary care center. The main limitations include patient compliance, lack of manpower, operation theatre availability and a long waiting list. Detailed workup, photographs and counselling is needed to be provided to the patients prior to surgery regarding the surgical procedure, postoperative care, expected outcome. Written informed consent for treatment and academic purposes was obtained from all individual participants who presented to our outpatient department for septorhinoplasty surgeries.

Almost all patient for whom we did the surgery during this period were satisfied with the results which was mainly a subjective assessment.

## Ethical approval

Ethical approval was obtained.

## Funding requirement

No funding was required for this study

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None.

## Competing interests

Authors have declared that no competing interests exist.

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