Rhinoplasty Experiences in a Tertiary Care Center of Nepal

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Article received in December 27, 2008. Article approved in February 25, 2009.

SUMMARY

Objective: This study was carried out to observe the causes and types of external nasal deformity, types of surgical procedures and to determine the patient's satisfaction following surgery.

Method: This is a prospective longitudinal study done in the Department of ENT and Head and Neck surgery, TU Teaching Hospital, Kathmandu. There were 89 patients who underwent different types of rhinoplastic procedures with or without septal surgery between April 2004 and July 2008. Ages less than 16 years were excluded. Statistical analysis was done using frequency and percentage.

Results: Cause of external deformity includes developmental in 50 patients, traumatic in 35 patients, postoperative and infective in 2 patients each. Fourty one patients had crooked nose, 27 patients had hump and 8 patients had saddle nose deformity. Seventy patients had associated deviated nasal septum. Around 79.6% patients were satisfied fully.

Conclusion: Developmental cause followed by trauma were the most common cause of external nasal deformity while crooked nose was the most common type of nasal deformity. Septoplasty with corrective rhinoplasty were done in around half of the patients. Majority of the patients were satisfied with the surgical procedures.

Keyword: nasal deformity, rhinoplasty, graft materials, patient's satisfaction.

Introduction

Rhinoplasty is a surgery to repair or reshape the nose. The word rhinoplasty was derived from Greek words: Rhinos means "Nose" and Plastikos means "to shape" (1). The first description of nasal reconstruction is mentioned in Susruta Samhita as early as 6th century B.C. (2,3). In the past, Joseph did rhinoplasty for cosmetic purposes in those patients who felt that the shape or size of their nose caused them embarrassment and social discomfort and he is considered as the father of rhinoplasty (2). Later his work was refined by Aufricht (2).

The nose is the center of the human face, and the feature perhaps most closely associated with what we call "character" (4). Anatomic studies are also pivotal to the progress of rhinoplasty. Alteration of its shape must be handled with great care, subtlety, and artistry, for no form of cosmetic surgery will so influence that way a face is percieved (4). It is difficult to define objectively the beauty of face, but we can characterize it as a combination of symmetry, proportions and harmonious relationship among the structures (5).

The indication for rhinoplasty is a particularly difficult problem, and the surgeon carries a huge responsibility for refusing or accepting the request. It is an easy operation to do, but it is hard to get good results (6). There are two approaches for septorhinoplasty, the endonasal approach and the external approach (7). This external approach is more or less a synthesis of the subcutaneous endonasal method and surgery under visual control, with the only sacrifice of a small scar which has marked advantages on the other hand (8). One of the disadvantages of the usual endonasal technique pf rhinoplasty is the poor surveyability of the surgical field (8).

With the modernization of society demand of cosmetic value has been increasing. In majority of centers rhinoplasty is done by plastic surgeons and general people have the concept that this is the work of plastic surgeons. In Nepal, this cosmetic surgery is in the primitive stage. It is being regularly performed in the Department of ENT and Head and Neck Surgery, TU Teaching Hospital, Kathmandu since last three years. There has not been any study in this field in our context so far. Therefore, this study was carried out to observe the causes and types of external nasal deformity, types of surgical procedures and to determine the patient's satisfaction following surgery.

Method

This is a prospective longitudinal study done in the Department of ENT and Head and Neck surgery, TU Teaching Hospital, Kathmandu between April 2004 and July 2008. Patients less than 16 years were excluded.

Detailed history was taken regarding demographic profile, causes of nasal deformity, symptomatology and expectation of the patients. Thorough ENT examination was done. They were explained about surgery, possible postoperative complications and need of second stage surgery. Informed consent was taken. Ethical approval was taken fro the ethical review board of the hospital. Preoperative photographs were taken in frontal, basal and three quarter views. Patients underwent surgery under either general anesthesia or local anesthesia. In those patients with hump and saddle nose, closed rhinoplasty was performed by giving combination of hemitransfixation and intercartilaginous incision. In those patients having minimum crooked nose, bilateral lateral osteotomy was sufficient, and it was performed by giving pyriform incision. While in those patients who needed lateral and intermediate osteotomy for crooked nose these procedures were done by giving small niche along the nasofacial groove which would be barely visible after a week. In those patients who had gross deviated nasal septum septoplasty was done prior to rhinoplasty. Bilateral anterior nasal packing was done with Bismuth Iodoform Paraffin Paste (BIPP) in all the patients and it was removed after 48 hours. Plaster of Paris cast or external nasal splint was applied in all the patients after surgery and it was kept for 2 weeks. Patients were followed up after 2 weeks, 4 weeks and 6 weeks. Postoperative photographs were taken in same views on 6 weeks follow up. Patients satisfaction were rated in the following three points: full satisfaction; partial satisfaction and no satisfaction.Statistical analysis was done using frequency and percentage.

Results

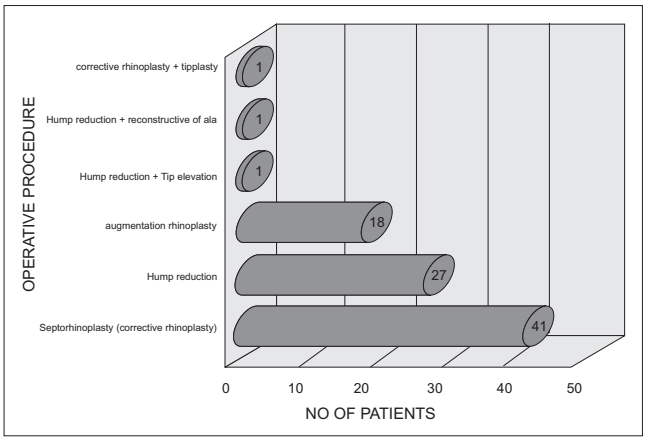
Out of 89 patients, 75 were male and 14 were female with ages between 16-66 years. Seventy patients had deviated nasal septum but septoplasty was done only in 23 patients who had gross deviation. Causes of external deformity were found to be developmental in 50 patients, traumatic in 35 patients, postoperative and infective in 2 patients each (Table 1). Fourty one patients had crooked nose, 27 patients had hump and 8 patients had saddle nose deformity (Table 2). Forty one patients underwent septorhinoplasty (corrective rhinoplasty), 27 patients underwent hump reduction and 18 patients underwent augmentation rhinoplasty (Picture 1). Autologus septal cartilage was used to augment saddle nose in 10 patients while autologus iliac crest was used in 4 (Picture 2). There were 79.6% patients that were fully satisfied postoperatively while 10 patients were partially satisfied and 2 patients were not satisfied.

Table 1. Causes of nasal deformity.

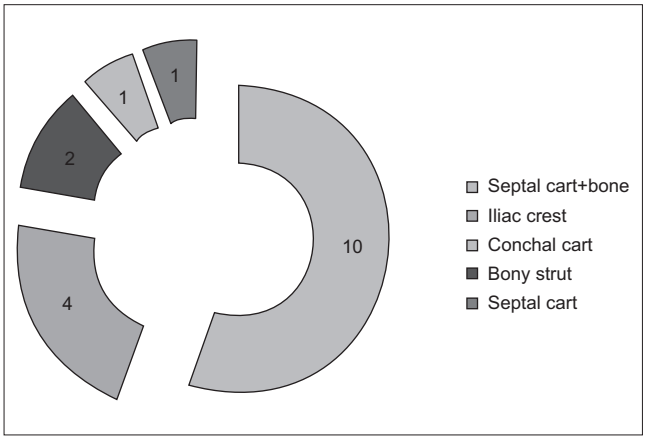
Causes	Number of Patients (Percentage)
Developmental	50
Traumatic	35
Infective	2
Postoperative	2
Total	89 (100.0%)

Table 2. Distribution of nasal deformity.

Types of nasal deformity	Number of Patients (Percentage)
Crooked nose	41
Hump	27
Saddle nose	17
Hump plus drooped tip	1
Hump plus asymmetrical ala	1
Crooked nose plus deviated tip	1
Supratip deformity	1
Total	89 (100.0%)



Picture 1. Types of operative procedure.



Picture 2. Types of graft material used.

Discussion

The nose is located in the central portion of the face and also the most prominent structure, so any small deformity is easily visible. Therefore it is not surprising that nasal surgery or rhinoplasty is performed so often. Nevertheless, rhinoplasty is a significantly satisfactory procedure that helps individuals achieves greater self-esteem and personal satisfaction. Sex, age, primary or secondary rhinoplasty, public or private practice, time between first consultation and surgery, posttraumatic or non posttraumatic criteria, and functional or nonfunctional criteria did not appear the improvement scores. Outcome research also examines the end results of medical interventions, but the major difference is the latter's emphasis on outcome from the patient's perspectives (9). Some authors use questionnaires (10,11) but Alsarraf et al (12) were the first to offer and test an outcome instrument for rhinoplasty in terms of its test- retest reliability, internal consistency. These data are useful for assessing different kinds of patients or different surgical techniques, and for comparing the results of different surgeons or for assessing one's progress in rhinoplasty.

The male preponderance for rhinoplasty in our study is similar to the study done by Oeken et al study (13) but female preponderance has also been seen in other studies. The male preponderance might be due to difference in socioeconomic factor because in our society males are mainly involved in external works and they are more prone to have nasal trauma. Moreover, they may have better knowledge about the facility of rhinoplasty in our country.

In the study by Oeken et al, (13) all patients suffered from deviated nasal septum. However, our study shows only forty four patients had deviated nasal septum. Regarding the external nasal deformity, it was more or less consistent with that of Oeken et al study (13) who reported that 38 patients had crooked nose with or without hump, 7 patients had hump and 7 patients had saddle nose deformity or other deformities.

Small hump can be reduced by rasping only. However, for larger hump osteotomy is needed. Crooked nose is the most difficult nasal deformity to be corrected. In order to correct it, lateral and medial as well as intermediate osteotomy may have to be done. Crooked nose with deviated nasal septum being the most common type of deformity, septoplasty with corrective rhinoplasty was the most common rhinoplastic procedure done in our study. In order to augment saddle nose deformity we used autologus

graft due to the fact that though various artificial materials are available they are costly.

Majority of our patients were satisfied with the surgery, 79.6% being fully satisfied and 8.5% partially satisfied. Oeken et al study revealed that the final aesthetic outcome was assessed by 39 patients (75.0%) as an improvement, 12 patients (22.0%) as unchanged and 1 patient (2.0%) as worse (13). However Zojaji et al (14) and Babuccu et al study (15) showed that 55.1% and 72.0% were satisfied with rhinoplasty respectively. Still we have to look for long term satisfaction in patients undergoing these procedures. Traditional assessments of an operation's success examine mortality, sequelae, revision rate, function and shape by direct means. Future studies of rhinoplasty outcomes evaluation improvement scores and their relationship to psychological parameters will no doubt involve the examination of social anxiety.

Conclusion

Developmental cause followed by trauma were the most common cause of external nasal deformity while crooked nose was the most common type of nasal deformity. Septoplasty with corrective rhinoplasty were done in around half of the patients. Majority of the patients were satisfied with the surgical procedures. Since this surgery is done by plastic surgeons also in our hospital, the number of patients is low in our study. The study will be continued with larger number of patients and long term follow up to validate our results.

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