Psychosocial Impact of External Nasal Deformity before and After Rhinoplasty

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ABSTRACT: OBJECTIVE: To find out psychosocial impact of external nasal deformity before and after primary rhinoplasty. STUDY DESIGN: Prospective, longitudinal and comparative study. PLACE OF STUDY: Ganesh Man Singh Memorial Academy of ENT-HN Studies, Tribhuvan University Teaching Hospital, Maharajgunj, Kathmandu, Nepal. DURATION: Dec. 2012 to Sept. 2013. PATIENTS AND METHOD: Questionnaires were filled up by patients prior to surgery and when they came to follow up 6 weeks after surgery. In order to compare psychosocial effects pre and post-operatively, pre-operative questions were added in Glasgow Benefit Inventory (GBI), 4 point numerical rating scale was used. Mean value calculated and compared by using paired t-test. Five point numerical rating scale was used for remaining questions. RESULTS: Out of 34 patients, 23 were male and 11 female. Age ranged from 18-57 years with mean age of 24.32 years. Twenty one patients had problem to attend social gathering before surgery while only 2 patients had some problem after surgery. Seventeen patients hesitated to talk to opposite gender prior to surgery whereas only 1 had some hesitation after it. Twenty four patients were anxious due to nasal deformity prior to surgery while only 3 patients had little anxiety after surgery. While compared statistically these points were highly significant. Self confidence was increased drastically in 21 patients after surgery. Twenty four patients felt extremely good after surgery, however, only 5 patients did extremely better in studies or work. Twenty six patients were fully satisfied with the surgery, 7 patients were satisfied moderately while 1 patient had minimal satisfaction. CONCLUSION: The study concluded that external nasal deformity has a significant psychosocial impact. Rhinoplasty has significant role to reduce this impact of the external nasal deformity. KEY WORDS: External nasal deformity, Psychosocial impact, Primary rhinoplasty.

INTRODUCTION: Nose is the most prominent structure of our face. Its shape and size denotes personal as well as racial identification and beauty of the face. It is also most vulnerable structure to any trauma like physical assault, road traffic accident and fall. During ancient time nose used to be chopped as punishment to enemies and if somebody does adulteration. If the nose is deformed, it may have psychological as well as social impact specially in young people. For example, if a young male has crooked nose, he may hesitate to attend social gatherings. Rhinoplasty is the surgery done to correct nasal deformities. It can be done with or without septoplasty. However, it is usually done along with septoplasty specially in cases of crooked noses which in majority of cases is associated with gross deviated nasal septum. Psychological assessment of the patients prior to rhinoplasty is carried out to rule out any psychological problem in the patient which significantly affects postoperative satisfaction of the patient. Aesthetic outcome of rhinoplasty has also been assessed by many authors. No prospective study has been done to compare this psychosocial impact of external nasal deformity till date. This study tried to estimate the severity of the psychosocial impact of the external nasal deformity in our society and also determine role of rhinoplasty to reduce the impact of this kind of deformity. It would be also helpful to evaluate and counsel the patient preoperatively and modify the management accordingly.

PATIENTS AND METHOD: This was a prospective, longitudinal and comparative study carried out in Ganesh Man Singh Memorial Academy of ENT-Head & Neck Studies, Tribhuvan University Teaching Hospital, MMC, IOM, Maharajgunj, Kathmandu, Nepal. This study was conducted during a period of 10 months from December, 2012 to September, 2013. Inclusion criteria 1. Patients who underwent primary rhinoplasty with or without septoplasty 2. Both gender 3. Age 18 years and above Exclusion criteria 1. Patients who denied to participate in the study 2. Patients who underwent rhinoplasty with other cosmetic surgeries like blepharoplasty, cheek augmentation, chin augmentation or reduction 3. Patients who lost follow up 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 the study. Written consent was taken. Ethical approval was taken from the Ethical Review Board of the Institute of Medicine, Tribhuvan University. Surgery was done by a single surgeon. Transcollumellar (inverted V) and bilateral marginal incisions were given for open approach while
hemitransfixion incision and bilateral intercartilaginous incisions were given for closed approach. For crooked nose, bilateral lateral and median osteotomy was done. A questionnaire translated in Nepali were filled by patients prior to surgery and when they came to follow up 6 weeks after surgery. In addition to this, patients were evaluated in terms of correction of nasal deformity during follow up by comparing pre and post-operative photographs. In order to compare psychosocial effects pre and post-operatively, pre-operative questions were added in Glasgow Benefit Inventory (GBI) which was used to evaluate patient satisfaction retrospectively following many ENT interventions and to simplify the questions and rating scales of GBI, 4 point numerical rating scale (extremely-3, to some extent-2, little bit-1, none-0) was used8. Mean value was calculated. Five point numerical rating scale was used for remaining post-operative questions. Data were analysed by using SPSS latest version. Paired t-test was applied. P-value <0.05 was considered statistically significant.

RESULTS: Total 39 patients underwent primary rhinoplasty during above mentioned period. Of these 39 patients, 5 patients lost to follow up. Therefore, total 34 patients were included in this study. Age of the patients ranged from 18-57 years with mean age of 24.32 years. Causes of external nasal deformity in the included subjects are given in table-1. There were 23 male and 11 female patients with male female ratio of 2.09:1. Regarding types of deformity, 27 patients had crooked nose, of these 3 patients had flared alae and 1 patient had bulbous tip also. Five patients had hump nose and 2 patient’s saddle nose. All the patients with crooked nose had deviated nasal septum. Therefore, 27 patients underwent septoplasty with corrective rhinoplasty, out of these 3 patients had bilateral reduction of alae as well. Five patients underwent hump reduction while 2 patients had augmentation rhinoplasty. The graft material used for augmentation was costal cartilage in 1 patient and iliac crest in another patient. Eleven patients underwent open approach whereas 13 patients had closed rhinoplasty. Duration of follow up ranged from 3 to 10 months. There was no patients who was totally dissatisfied or demanded redosurgery. Feeling of awkwardness and anxiety in social gathering due to nasal deformity was found to be minimal as depicted in table-2. There was minimal change of self confidence at education or work as shown in table-3.

DISCUSSION: With the modernization of society demand of cosmetic value has been increasing. Beside this due to increased rate of social violence, sports and road traffic accidents number of patients with nasal deformity is also rising. Along with this scope of cosmetic procedures including rhinoplasty is also going up. Americans spend over $12 billion per year on cosmetic procedures6,7. Attractiveness influences both the way people think about themselves as well as their behavior toward others and is related to traits such as self-confidence and social acceptance8. The studies have shown that cosmetic interventions can help improve the quality of life and psychological well-being of patients electing to undergo these procedures. The positive changes evoked in these patients were related to their feeling healthier and more satisfied with their appearance, being less anxious, having better emotional well-being, and having more confidence. Quality of life outcomes thus represent an important approach by which practitioners and patients can better assess the effects of cosmetic interventions8. Different tools have been used to assess the end results of medical interventions. Some authors use questionnaires but Alsarraf et al were the first to offer and test an outcome instrument for rhinoplasty in terms of its test- retest reliability, internal consistency10,11,12. 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. Among 34 patients who underwent primary rhinoplasty, about two third of the patients were male. This finding is consistent with the finding of Oeken et al and Aslam et al who reported 33 males out of 52 patients and 26 males out of 31 patients respectively in their study while other studies showed more female patients3,13,14. The reason behind this may be in our society males work outside than females and they are more prone to get trauma and also due to male dominating society. Similarly, our maximum patients were of age group less than 30 years with mean age of 24.32 years. This finding is similar to other studies. Bagheri et al reported average age 24.4 ± 6.8 years old15. This indicates that this age group are more aware of their nasal deformities. Most of our
patients had nasal deformity due to development ie. they do not know the exact cause. It was associated with gross deviation of the nasal septum. In the study by Oaken et al all the patients who underwent rhinoplasty had septal deviation3. Twenty one patients felt awkward while attending social gathering due to nasal deformity while only 2 patients felt awkward after surgery. Similarly, seventeen patients felt hesitation to talk to opposite gender pre-operatively while only 2 patients felt hesitation post-operatively. Dinis et al found that 13 out of 25 reported that they became aware of being more socially desirable than before surgery. Seven of them further referred that improved appearance had significantly benefited their social inter-relationships13. About two third of the patients had anxiety due to their nasal deformity, whereas none of them had anxiety post-operatively. In order to compare these results I did not find any literature. Most of the patients had significant improvement in their self-confidence and feeling after surgery. However, only one third of the patients mentioned that they had significant change in their work or study after the surgery. Regarding satisfaction, all the patients were satisfied with their nasal appearance after the surgery. Of these, 26 patients were fully satisfied5, were moderately satisfied1, patient was slightly satisfied and none of them were unsatisfied. Our result is comparable with that of other studies. In the study by Oeken et al out of 52 patients 39 reported as an improvement, 12 patients as unchanged, and by 1 patient as worse3. In another study by Dinis et al 84% patients reported a very good/good and 16% an average, with no cases of mediocre/bad aesthetic results13. The study by Aslam et al cosmetic result was appreciably good in 20 (64.5%) patients by subjective evaluation14. According to Bagheri et al out of 101 patients 16 % reported unsatisfied following surgery15. In a study by Arima et al in case of crooked nose 90% of patients undergoing rhinoplasty believed they achieved a good result16. CONCLUSION : External nasal deformity has a significant psychosocial impact. Rhinoplasty plays a significant role to reduce psychosocial effect of external nasal deformity. This study will be continued with a larger sample size to validate the present results.

REFERENCES: