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OUTCOME OF FUNCTIONAL ENDOSCOPIC SINUS SURGERY FOR CHRONIC RHINOSINUSITIS

Objective:

To measure the outcome of Functional Endoscopic Sinus Surgery (FESS) for Chronic Rhinosinusitis in early postoperative period.

Materials and Methods:

This is a prospective comparative study conducted in Ganesh Man Singh Memorial Academy of ENT-Head and Neck Studies, Tribhuvan University Teaching Hospital, Kathmandu, Nepal from November 2009 to March, 2011. Thirty cases of Chronic Rhinosinusitis diagnosed by clinical and radiological criteria were included in this study. Modified sinonasal outcome test was used to record the pre and postoperative scores and compared by using paired t- test.

Results:

All the cases showed significant improvement in postoperative scores in both physical and psychosocial domains of modified sinonasal outcome test. Two symptoms, concentration and misery of psychosocial domain didn't improve significantly.

Conclusion:

This study attempts to measure the outcome of FESS in patients with CRS. Nepali version of SNOT-10 has been used in the Nepalese population. Significant improvement in quality of life score has been observed in early postoperative period.

Key Words: Quality of Life, Modified Sinonasal outcome Test, FESS

INTRODUCTION:

Rhinosinusitis refers to a spectrum of inflammatory and infectious disorders affecting the mucosal lining of nose and paranasal sinuses. Chronic rhinosinusitis is rhinosinusitis of at least twelve consecutive weeks' duration. Successful management of rhinosinusitis via medical or surgical treatment is achieved in the majority of patients. Treatment of chronic rhinosinusitis is intended to reduce symptoms and signs, improve quality of life and prevent disease progression or recurrence. The traditional approach has been to treat them with antibiotics once or twice and then send them to a surgeon if the symptoms persist. Functional Endoscopic Sinus Surgery has revolutionized the way otolaryngologists manage chronic rhinosinusitis.

One immeasurable result of any disease such as rhinosinusitis is the impact on quality of life (QoL). Recent efforts to evaluate the impact of disease on quality of life and the outcome of disease have clarified the importance of such impacts. Glicklich et al.¹ have shown that rhinosinusitis has a significant quality of life impact, even in comparison to chronic debilitating diseases such as diabetes and congestive heart failure. Various subjective tools are in use for assessing the quality of lives of patients undergoing endoscopic sinus surgery. Sinonasal outcome test (SNOT) is a validated tool of its kind. It consists of both nasal (physical) and psychosocial symptoms and used for assessment of quality of life of CRS patients. Based on experience and applicability in our setup, 10 symptom SNOT scoring system (SNOT-10) has been developed. The nasal symptoms include need to blow nose, nasal obstruction, sneezing, runny nose, thick nasal discharge, hyposmia and facial pain. Sleep, concentration and misery were psychosocial symptoms. This is more thoughtful and practical in evaluating the quality of life in patients suffering from chronic rhinosinusitis after FESS.

MATERIALS AND METHODS:

This was a prospective, interventional and comparative study conducted in Ganesh Man Singh Memorial Academy of ENT-Head and Neck Studies, Tribhuvan University Teaching Hospital, Maharajgunj, Kathmandu, Nepal for the duration of eighteen months starting from November 2009 to March, 2011. Thirty cases of Chronic Rhinosinusitis cases diagnosed by clinical and radiological criteria were included in this study. Preoperative scores were recorded by using modified sinonasal outcome test and compared with postoperative score after eight weeks. Standard Messerklinger technique of FESS was followed by a single surgeon.

RESULTS:

Thirty five patients who fulfilled the inclusion criteria were included in the study. Five patients were excluded since they were lost to follow up. Fifteen patients were males and equal number of patients were females. The age range was 13 to 61 years with the mean age of 30.6 years. The most common symptom was nasal obstruction. The preoperative symptom scores by modified sinonasal outcome test, postoperative scores and their comparison has been shown below in graphical form. Statistical analysis of the results was done by SPSS software version 16 and means and standard deviation of scores were compared by using paired t test. Both the domains of physical and psychosocial symptom scores of SNOT-10 showed significant difference ($p < 0.05$). Two measures of psychosocial domain; concentration and misery didn't show significant improvement postoperatively.

DISCUSSION:

Patient centered outcome measures have been increasingly used for assessment in most of the fields of medicine in the recent years. In case of chronic diseases in which no single definitive treatment

Fig. 1: Pre operative mean modified SNOT Score

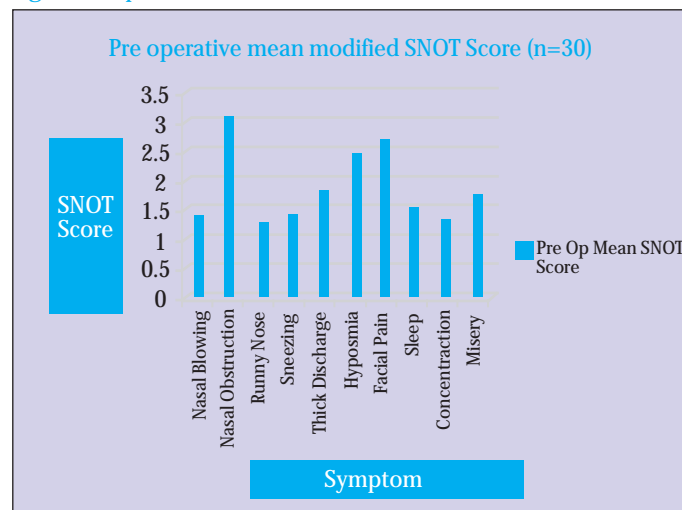


Fig. 2: Showing post operative mean modified SNOT Score

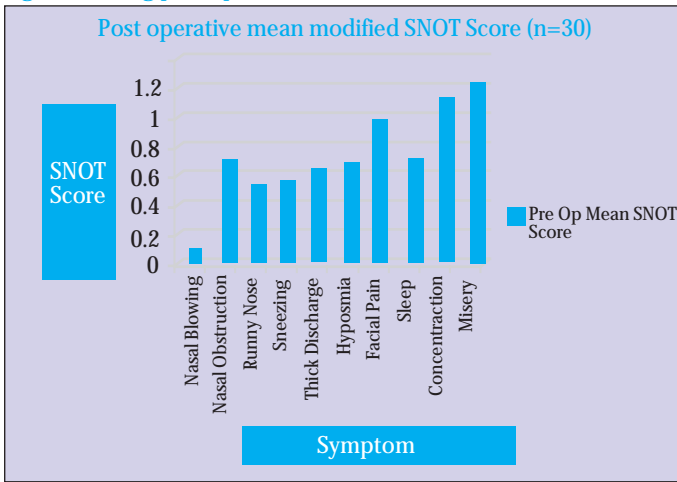
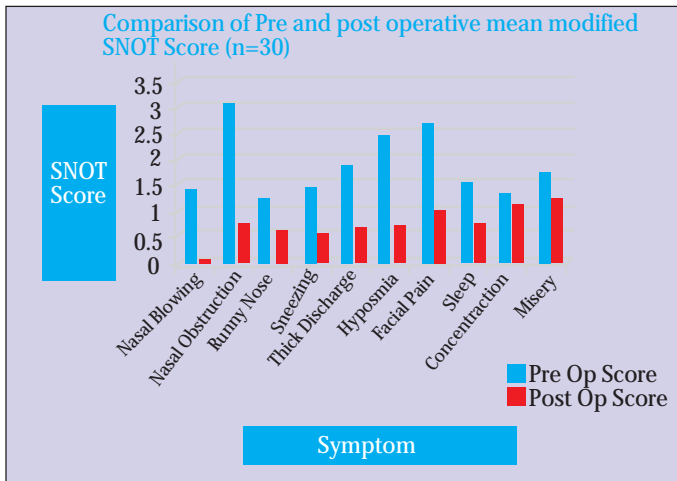


Fig. 3: Showing comparison of Pre and post operative mean modified SNOT Score



modality is available, effect of the treatment on the QoL of patient has been emphasised for making the decisions. In chronic rhinosinusitis patients, various disease specific tools are in use such as Rhinosinusitis Disability Index, Nasal Symptom Questionnaire, General Nasal Patient Inventory, Sinonasal-5 Quality of Life Survey, Sino-Nasal Assessment.

Questionnaire, Chronic Sinusitis Survey, Rhinosinusitis Quality of Life Survey and Sinonasal Outcome Test². Among these instruments for rhinosinusitis, SNOT appeared to be simple and easy to use tool and

was validated, reliable and sensitive to change. Modifications were made to exclude the confusing psychosocial symptoms and make it more simple and easily understandable. In our study, we have found that there was a statistically significant difference between pre and postoperative symptoms score as measured by modified Sinonasal Outcome Test. Not only the total score improved significantly, but also the different subscales of measurement including physical as well as psychosocial symptoms score. Similar results has been shown by different studies by various authors such as Rudmik et al.³ and Mishra et al.⁴ Contrary to the result of this study, Al Badaai in 2010⁵ has shown that out of 120 patients, 72 per cent reported clinical improvement, 12 per cent reported deterioration and 15 per cent remained unchanged and they concluded that patients with chronic rhinosinusitis achieved a significant improvement in disease-specific quality of life after functional endoscopic sinus surgery. There was no significant improvement in general health related quality of life. Nasal obstruction has been found to be the most common symptom followed by facial pain and thick nasal discharge in our study. Similar results have been reported by Mishra et al.⁴ There was no significant improvement in symptom score of concentration and misery. The reason could be the chronic nature of the disease with which patients become accustomed with it and carry on their daily activities.

CONCLUSION:

This study attempts to measure the HRQoL in patients of CRS after FESS. Nepali version of SNOT-10 has been used in the Nepalese population. Significant improvement in quality of life score has been observed in postoperative period at 6-8 weeks. The drawbacks as with other outcome studies have been considered. Longer follow up with larger sample size is required to comment on the persistence of the improvement in the symptoms and quality of life.

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