INFERIOR TURBINOPLASTY WITH MICRODEBRIDER AND CONVENTIONAL TURBINECTOMY-EXPERIENCED IN GOVERNMENT TERTIARY CARE HOSPITALS

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ABSTRACT

The inferior turbinate plays an important role in normal physiology contributing for regulation of nasal air flow as well as warming and humidification of inspired air. Hypertrophy of inferior turbinate's results in nasal obstruction. The various methods are available for surgical treatment of hypertrophic inferior turbinate. Most of the turbinate resection techniques results for destruction of the mucosa. The main proximity of the research gap was documented a limited study availed Indian perspectives in this area we study and compare the inferior turbinoplasty with microdebrider with conventional partial inferior turbinectomy with clinical subjective for the improvement of nasal obstructions. The patients with nasal obstruction on hypertrophied inferior turbinate's purposively divided in to two groups of 30 patients in each. The Inferior turbinate size was graded as graded I and it was occupied less than one third of nasal cavity. Similarly in grade II represented more than one third of the nasal cavity. The one group was done at conventional partial inferior turbinectomy and remaining group was done with microdebrider as assisted with turbinoplasty. The intraoperative and post operative bleeding was graded (0-10) by the visualization methods. The patients were follow up event was carried out for the successive period of one weeks, one month, three months and six months respectively.

The clinical improvement in nasal obstruction was equated for both groups. In case of CPIT group intra operative bleeding was 66.66% (Grade II) grade III was 10.0% respectively. The majority of the patients was apparently there were expressed grade II blood loss (bleeding). In case of post operative bleeding (at the time of pack removal) the grade I recorded was 60%; grade II was 36.66% and grade III was 3.0% respectively. As in case of MAT group the intraoperative blood loss was recorded in grade II. Majority of the patients was 46.0% graded I and similar comparable group was expressed 40% variations observed in postoperative blood loss. The blood loss was very less in case of grade I. Over the period of six months follow up 6.66% was developed crusting as in case of CPIT groups, the complications were not been encountered in MAT groups accordingly.

The present study results suggests that, for both surgical intervention groups will makes an equally efficient for relieving different nasal obstructions. Microdebrider could be assisted inferior turbinoplasty for prior preservation of mucosa of nasal physiology. The study filled the gap for declined the instance of development of multiple complications and euphoric changes were made by turbinoplasty.

KEYWORDS: Conventional Partial Inferior Turbinectomy, Microdebrider Assisted, Postoperative MAT
INTRODUCTION

The inferior hypertrophy is the main cause of symptomatic nasal obstruction. It interferes with the quality of life. Perennial allergic and non allergic rhinitis are the most common non infectious causes of inferior turbinate's hypertrophy. Patients suffering from chronic nasal obstruction and hypertrophic turbinate's often benefits of reduction of turbinate's, especially when other medical therapeutic approach fails. Various methods have been proposed and are available for the surgical intervention of hypertrophic inferior turbinate's. Most turbinate resection techniques results in destruction of the mucosa, this has been reported for the increase on the risk of dryness, nasal crusting, nasal bleeding and extremely patent nasal cavity. Surgical reduction of the inferior turbinate is aimed at optimal volume reduction with preservation of different function. Microdebrider assisted inferior turbinoplasty offers effective volume reduction with preservation of the physiological function of the turbinate. The present study evaluate to compare the benefits of inferior turbinoplasty with microdebrider and conventional partial inferior turbinectomy in subjective and objective improvement of nasal obstruction.

METHODS

The data was collected from patients attending at BMCRI attached hospitals. Patients with nasal obstruction with hypertrophied inferior turbinate, patients with allergic and non allergic rhinitis, patients between age group of 18 to 50 years, without nasal obstruction, patients below age 18 yrs and age of 50 yrs patients with acute rhinitis, chronic granulomatous disease, Sino nasal polyps, previous history of nasal surgeries, tumors and coagulopathies were included for the study. Total sixty patients who presented with nasal obstruction and hypertrophic inferior turbinate were chosen with written informed consent. All cases were diagnosed. The detailed history of nasal obstruction and associated symptoms of sneezing headache, nasal discharge were collected by pretested questionnaires. The severity of nasal obstruction was assessed on subjective basis as moderate, severe, on patients discomfort. The detailed clinical examination was done, the degree of nasal obstruction was graded objectively by measuring fogging through nose cause during quite breathing over calibrated steel plates. Anterior rhinoscopy and posterior rhinoscopy was done to assessed the nasal diseases and inferior turbinate hypertrophy. Diagnostic nasal endoscopy was done to assessed the patients. The standard operative procedures were done for all the recruited patients. Conventional partial inferior turbinectomy and microdebrider assisted inferior turbinoplasty was done at standard operative procedures. Collected data was analyzed by using SAS -16.50 version univariate analysis was employed to test the hypothesis.

RESULTS

![Figure 1: Nasal Symptoms among CPIT and MAT Groups](image-url)
Total sixty patients was deviated nasal septum (DNS) and B/L hypertrophied inferior turbinate. The micro nasal discharge was presented in 12 patients among CPIT group and ten cases were found in MAT group respectively. The findings of fogging was recorded it was graded based on (0-10 scale ) the grade I was 80%,grade II 13.3% and grade III was 6.70% respectively.Majority of the patients belongs to MAT group and it was recorded on grade wise severity, the grade I was 70%; grade II was 20% and grade III was 10% respectively.Similar parameters was correlated with respect to size of the turbinate inferior in case of CPIT group grade I (16.66%) grade III (83.33%) inferred to express the different sizes. Again we have been correlated the size of turbinate size of MAT group there was statistically significant (p<0.01) when compared to MAT group. Blood loss were significantly associated in grade II and Grade III on intraoperative period of both groups (p<0.01). the increment differences were seen in both groups and there found to be statistically significant (p<0.01) descriptive statistics was presented in figure 1, 2 and 3.As per the documented results of postoperative complications CPIT and MAT were not found to be statistical significant differences of successive follow up period like 1 months and 3 months. after the period of six months there was found to be significantly associated with fewer complications.
DISCUSSIONS

Inferior turbinate surgery could be advocated for relief of symptoms among patients with chronic obstructions with hypertrophied inferior turbinate when medication fails Numerous reports have been substantiate the usefulness of inferior turbinate surgery for evaluated the various methods adopted for reduction of turbinate, preserving the function of the turbinate is of utmost importance for evaluating the efficacy of the techniques an alleviating nasal obstruction, preventing development of side effect encountered over a short and long term yield. Present study nasal obstruction is subjectively graded as mild, moderate and severe condition of the patients and also we objectively graded assessed by the use of cold spatula test. another study was reported with similar findings in pre and post operative clinical findings. Friedmann et al (2004) discussed the enlargement turbinate size can makes a complications for both groups and also it could be affected in follow up action.

CONCLUSIONS

The extent of turbinate mucosa removed in conventional partial inferior turbinectomy is substantial.Hence it could be associated with higher incidence of intra operative and post operative bleeding as well as an increased risk of crusting synechiae formation over long period of time. The present study incidence of complications is comparitively less when compared to microdebrirder assisted turbinoplasty.

REFERENCES

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