

Comparative Study of Management Between Partial Turbinectomy and Submucous Diathermy

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ABSTRACT

Objective: Comparative study between partial turbinectomy and submucous diathermy (SMD) to observe merit and demerit of management of chronic inferior turbinate hypertrophy.

Study Design: Comparative study.

Place & Duration: Department of Otolaryngology PUMHS Nawabshah, from April 2010 to March 2011.

Material and Methods: Fifty consecutive patients were included as per inclusion and exclusion criteria, all having bilateral inferior turbinate hypertrophy with nasal obstruction. We divided patients in two equal half as groups A and B according to surgical procedures. In group A, partial turbinectomy was done, while in group B submucous diathermy was applied. Post operative follow-up was carried out on 01 week than, 1, 3, 6 months assessments.

Results: In group B 80% improvement of nasal air flow was seen while 98% in group A. Postoperative hemorrhage was not seen in submucous diathermy cases and 2% hemorrhage was seen in partial turbinectomy. Edema and pain was recorded in S.M.D cases. Wile nasal crust, pain and bleeding were observed in group A.

Conclusion: Different surgical techniques are used for the management of chronic inferior turbinate hypertrophy, but partial turbinectomy is more effective one in our study.

Key Words: Partial Turbinectomy, Chronic Inferior Turbinate Hypertrophy, Submucous Diathermy.

INTRODUCTION:

One of the major causes of chronic nasal obstruction is disease of inferior turbinate hypertrophy. Since the last quarter of the 19th century at least 13 different techniques have been introduced^{1,2}. Different surgical method have been used for inferior turbinate hypertrophy linear cautery, laser cautery, silver nitrate cautery, SMD and inferior turbinectomy³.

Nasal obstruction due to enlargement of the inferior turbinate is a common presentation in ENT out patients department. Nasal blockage leads to post nasal drip, nasal congestion and

and headache due to decrease aeration of sinuses⁴. Reduction in the size of inferior turbinate is very important for adequate airway with aeration of sinuses⁵.

The reduction in the size of inferior turbinate can be done by either medical or surgical procedures. But medical role is insufficient⁶. In our setup two surgical methods are commonly used in this condition for the treatment of inferior turbinate hypertrophy, partial inferior turbinectomy and S.M.D (Submucous diathermy)⁷.

The Aim of our study is to evaluate the effectiveness of two techniques, ie. Inferior turbinectomy and SMD (submucous diathermy) by comparing the response of patients to these two surgical modalities of turbinate reduction⁸.

MATERIAL & METHODS:

This is a comparative study on 50 consecutive patients, over a period of 1 year from April 2010 to April 2011, who attended department of otolaryngology in PUMHS

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Hospital Nawabshah. The age group is between 18 to 45 years. Patients were diagnosed for having chronic nasal obstruction due to inferior turbinate hypertrophy on the basis of history and clinical examination, which include anterior Rhinoscopy and nasal patency test. According to surgical procedures, we divided our patients equally in two groups. Group A for partial inferior turbinectomy and B for SMD Surgical procedure. Exclusion criteria were patients with history of trauma, previous nasal surgery, chronic disease like diabetes, hypertension, tuberculosis, and patients having nasal obstruction due to DNS, polyp, mass in nasal cavity.

All 50 patients were having bilateral inferior turbinate hypertrophy. Silastic sheets were applied in both sides to prevent the formation of adhesion. Postoperative complication including bleeding, nasal crusting, pain and nasal obstruction were studied on the 1st, 2nd, 7th, and 14th day. Post operative nasal douche with sodium bicarbonate was continued for one week in SMD and 10 to 14 days in partial inferior turbinectomy. Postoperative fallow up was carried out up to six months to observe the complain of nasal obstruction.

RESULTS:

The age group of patients included in our study was 18 to 45 years. The highest Incidence of Inferior turbinate hypertrophy was found to be more in Age group of 22 to 35 years. A total 50 patients participated in this study over a period of one year. Group A underwent partial inferior Turbinectomy while group B underwent SMD (Sub mucous diathermy). In each group 20 males & 5 females participated. Postoperative results are summarized in table 1 and 2.

Only mild type of bleeding was seen in group B patients while it is much frequently seen in Group A patients. Nasal crust & pain were more frequently seen in Group B patients while it is less frequent in group A patients. Postoperative nasal obstruction was more common in group B Patients, while it was not seen in group A patients. Dryness of mouth observed in group A patients while it was not seen in group B patients. Nasal

adhesion and other late complication were not seen in both groups in this study.

Table-1: Postoperative Bleeding and Nasal Obstruction (n=25)

Group	Mild	Moderate	Severe	Unaffected	Total
Type of Bleeding					
Group A	18	05	02	Nil	25
Group B	05	Nil	Nil	20	25
Postoperative nasal obstruction					
Group A	Nil	Nil	Nil	25	25
Group B	12	8	5	Nil	25

Table-2: Postoperative Nasal Crust and Dryness of Mouth (n=25)

Group	Present	Absent	Total
Nasal Crust			
Group A	03	22	25
Group B	05	20	25
Dryness of Mouth			
Group A	03	22	25
Group B	Nil	25	25

DISCUSSION

The Incidence of inferior turbinate hypertrophy in nasal obstruction is one of the common cause in otolaryngology. Mean age of patient suffering from inferior turbinate hypertrophy was between 18 to 45 years, in our study. Inferior turbinate hypertrophy almost always is due to swelling of the submucosa caused by dilatation of the venous sinusoids^{9,10}. There are different surgical procedures performed for the management of inferior turbinate hypertrophy. In our study we compared two methods of surgery in the management of inferior turbinate hypertrophy because in our country most widely used surgical procedures to reduce the size of inferior turbinate are SMD and Partial Turbinectomy^{11,12}.

Partial inferior turbinectomy is preferred by many surgeons as they have a dramatic response to relive nasal obstruction¹³.

Postoperatively in partial Turbinectomy we compared our results regarding improvements of nasal air flow in table No (3) partial inferior turbinectomy is more destructive surgery as compared to SMD¹⁴. SMD show less decrease in the size of inferior turbinate because it depends on

fibrosis of the soft tissue of inferior turbinate that does not take place in depth¹⁵. That's why in SMD nasal obstruction is more as compare to partial inferior turbinectomy. Few cases of dryness of mouth were observed in partial turbinectomy cases (table 04). Nasal Adhesion was not present because silastic sheets were applied with proper nasal douche. Other late complications were also not seen¹⁶.

CONCLUSION:

Different surgical procedures were used for the management of Chronic inferior turbinate hypertrophy but partial inferior Turbinectomy was more effective one.

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