BIPOLAR ELECTROFULGURATION WITH ENDOSCOPIC APPROACH IN ALLERGIC HYPERTROPHIED TURBINATE

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ABSTRACT

Background: Allergic hypertrophied turbinate, is managed by different treatment modalities, with variable outcome. **Objective:** To evaluate the result of bipolar electrofulguration with endoscopic approach in allergic hypertrophied turbinate. **Patients and Methods:** Study design: Descriptive, cross sectional study. Place: ENT department of Jaber AL - Ahmed Forces Hospital, Kuwait from 1st January 2008 to 31st December 2010. Fifty five cases of hypertrophy of Inferior turbinate were selected. Forty patients were females and 15 were males. They presented mainly with history of nasal blockage. Endoscopic bipolar diathermy was used to decrease the size of inferior turbinate. The variables included were nasal obstruction, post nasal drip, itching and sneezing. The patient were followed up on one, three and 6 month. The data was entered and analyzed by SPSS version 12. **Results**: Endoscopic bipolar diathermy showed good results after follow upto two six months duration. We found that 89% of the patients reported subjective improvement and 65% of the patients have objective improvement as well. **Conclusion:** Bipolar diathermy of inferior turbinate using zero degree endoscope is a good technique for excellent view of inferior turbinate. This procedure gives good results to the patients.

Keywords: Bipolar electro fulguration, Inferior turbinate, Naso-endoscope.

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INTRODUCTION

Nasal blockage, is one of the significant problem, reported in Ear, Nose & throat department. One of the frequent causes of nasal blockage is hypertrophy of inferior turbinate. Different modalities of treatment are available for the reduction of inferior turbinate size.[1] Bipolar diathermy, sub mucosal diathermy, LASER evaporation and turbinectomy are the common forms of treatments. Sub mucosal diathermy is one of the minimally invasive techniques.[1,2]

Bipolar diathermy along with zero degree nasoendoscope, gives a direct view of inferior turbinate from anterior to posterior end. This helps in precise diathermy of turbinate.[3] It increase the size of nasal cavity but it does not mean that increase in size of nasal cavity improve the function of nose.[3,4,5,6] Only precise diathermy helps in improvement of function of nose.[7] The objective of this study was to evaluate the result of endoscopic bipolar diathermy for inferior turbinate.

PATIENTS AND METHODS

A total of 55 cases of allergic rhinitis were included in this cross-sectional study. All these patients had history of hypertrophied turbinates for a span of at least five years.Place: ENT department of Jaber AL - Ahmed Forces HospitalKuwait from 1st January 2008 to 31st December 2010.

Those patients with an associated moderate to severe deviation of the septum were excluded from the study. Coronal CT of the osteomeatal complex, rhinomanometry and diagnostic nasoendoscopy were done. This procedure was performed under general anesthesia. Zero degree Hopkins Endoscope was used to visualize the different pathologies of the turbinate without any local anesthetic or decongestant. Cautery with specially designed bipolar probe was used to cauterize different parts of the turbinate. Follow up of patients was done and symptomatic improvement was tabulated at fourth week, three month and six month. The variables included were nasal obstruction, post nasal drip, itching nose, sneezing and headache. These variables were presented as percentage. The data was entered and analyzed by using SPSS version 12.

RESULTS

Preoperative Symptoms are mentioned in Table I. Symptomatic improvement was tabulated at fourth week, three month and six months. Results are shown in Table II.

Maximal destruction of sub mucosal tissue was noted to the engorged portion of the inferior turbinate, with an evidence of subjective improvement in the nasal symptoms in 49 cases (89.1%) and an objective improvement in 36 cases (65.5%) assessed by rhinomanometric study and nasoendoscopy.

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Table I: Preoperative Symptoms (Subjective assessment)

Symptoms	No (% age)
Nasal Obstruction	55 (100%)
Post Nasal Drip	26 (47%)
Hyposmia	28 (51%)
Itching of Nose	55 (100%)
Sneezing	55 (100%)
Rhinorrhoea	55 (100%)
Headache	15 (27%)

Table II: Postoperative Symptoms (Subjective Assessment)

Symptoms	4 weeks	3 Months	6 Months
Nasal Obstruction	30	13	6
Post Nasal Drip	16	6	10
Hyposmia	35	26	16
Itching of Nose	13	16	20
Sneezing	26	12	20
Rhinnorrhoea	12	14	18
Headache	20	13	9

DISCUSSION

Allergic rhinitis is a common problem in the Middle East region. There is an array of treatment modalities offered to combat this proviso. Several techniques have short and long term side effects including bleeding, atrophic rhinitis, nasal dryness, pain and blindness.[8, 9, 10, 11] The results of sub mucosal diathermy with or without fracture, partial inferior turbinectomy and linear cautery were all equally disappointing in the longterm.[1] The gold standard of treatment of inferior turbinate is still missing. Partial resection of inferior turbinate professed superlative results over electrofulguration but was abolished for its increased risk of bleeding and mortality.[12] Laser Cautery of the inferior turbinate superseded sub mucosal diathermy.[13] Electrocautery with immunotherapy as an appurtenance displayed significant improvement.[14] Sub mucosal resection with lateral displacement of the inferior turbinate results in good airflow and nasal functions.[15] Cryotherapy under local anesthesia causes more destruction of the sub mucosal vascular plexus than sub mucosal diathermy.[16] Submucosal diathermy has displayed better results in non – allergic patients.[17]
In this study, experience of endoscopic bipolar diathermy witnessed an increase in nasal airflow with minimum damage to the mucocilliary function. There was maximal destruction of sub mucosal tissue to the engorged portion of the inferior turbinate, with an evidence of subjective improvement in the nasal symptoms and objective improvement assessed by rhinomanometric study and nasoendoscopy.

CONCLUSION

Surgical treatment of allergic rhinitis patients employing endoscopic bipolar cautery showed credible results.

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