

A Study of Comparison of Success Rate in Various Surgeries against Symptomology in Allergic Rhinitis

Harinarayana .N¹, Shreya Mahendra²

MBBS, MS (ENT)

PG in MS ENT

Abstract: Rhinitis is defined as inflammation of nasal mucosa, a common disorder affecting up to 40% of the population. Allergic rhinitis is an IgE - mediated immunologic response of nasal mucosa to air borne allergens and is characterised by watery nasal discharge, nasal obstruction, sneezing and itching in the nose. It is distributed mainly in males, aged between 20-40 years. The commonest finding is hypertrophied inferior turbinate producing nasal obstruction. The best result is by inferior turbinoplasty which gives almost complete relief. A clinical study undertaken to study the various problems with allergic rhinitis, which require surgical management to relieve symptomology. Various surgical techniques employed, complications and outcome of these procedures is studied in a two year prospective study from 2015 – 2017 at S.V.S Medical College and Hospital, Mahabubnagar, Telangana state. A total of 64 patients between 20 years to 55 years with allergic rhinitis symptoms were included. Appropriate Surgery done for recurrent cases with failed medical treatment. Follow up for 2 months to 6 months. Results are analysed and presented.

Keywords: Allergic rhinitis, hypertrophied inferior turbinate, inferior – turbinoplasty, sub-mucosal diathermy.

1. Introduction

Rhinitis is broadly defined as inflammation of the nasal mucosa. It is a common disorder that affects up to 40% of the population [1]. Allergic Rhinitis is highly prevalent, allergen induced, upper airway inflammatory disease, characterised by hyperactive airway mucosa and episodes of symptoms chronicity with periods of acute exacerbation. Allergic rhinitis is the most common type of chronic rhinitis, affecting 10 to 20% of the population, and evidence suggests that the prevalence of the disorder is increasing. Severe allergic rhinitis has been associated with significant impairments in quality of life, sleep and work performance [2]. While it is not a life threatening condition, it is a significant cause of wide spread morbidity. Allergic rhinitis nose is a handicapped nose, if it is associated with hypertrophied inferior turbinate, Deviated nasal septum, Rhinosinusitis and Nasal Polyposis. All these cause more worsening of condition, so surgery is needed to correct all the above conditions. In India, 30-35% of population suffer from nasal allergy of which 80% are in productive age of below 40 years the reported prevalence of allergic rhinitis in young adults.

2. Materials & Methods

A two year prospective study from 2015– 2017 at S.V.S Medical College and Hospital, Mahabubnagar, Telangana state. A total of 64 patients who are aged between 20 years to 55 years with moderate to severe allergic rhinitis symptoms were included in the study. Participants with three or more symptoms of following - nasal obstruction, nasal discharge, headache, sneezing, nasal itching were selected. Only those in whom medical line of management failed and recurrent symptoms existed were selected. Subjects were excluded from the study if they had acute symptoms of allergic rhinitis or co-existing systemic disease, excluding

asthma. Detailed history and physical examination was done to all the patients included in the study. Information such as age, sex, occupation, was recorded. History with respect to the presenting symptoms, duration and etiological precipitating causes was taken. Investigations that were routinely performed include- routine blood investigations, absolute eosinophil count, radiological investigations - X-ray paranasal sinuses, CT scan PNS.

For the selected patient various surgeries performed were:

1. SMD
2. Partial inferior turbinectomy
3. Inferior turbinoplasty
4. Septoplasty.
5. Intranasal Ethmoidal polypectomy
6. MMA(middle meatal antrostomy)
7. Frontal Sinusotomy + Spenoidotomy
8. Septoplasty + SMD
9. MMA + Septoplasty
10. Septoplasty + Polypectomy + SMD

All the cases were discharged after anterior nasal packing removal and first schedule of endoscopic suction. All patients have been followed for minimum period of 2 months to 6 months with regular intervals.

3. Results & Discussion

During the study period 2 years, the total number of patients with the nasal symptoms of allergic rhinitis was 64. Of the total number.

Table 1: Number of Patients with the Nasal Symptoms of Allergic Rhinitis

Symptoms	No. of patients
Sneezing	11
Nasal obstructions	7
Post nasal drip	10
Rhinorrhoea	6
Headaches	5
Anosmia	2
More than 1 above symptoms	23

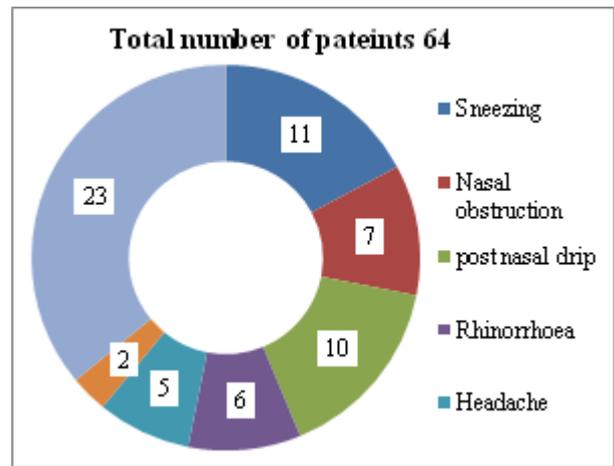


Figure: Number of Patients with the nasal symptoms of allergic rhinitis

Table 4: Endoscopic Findings in Study Group

Endoscopic Findings	HIT	DNS	RHINOSINUSITIS	NASAL POLYPOSIS	HIT+ DNS	DNS + RHINOSINUSITIS	HIT+ DNS +NASALPOLYPOSIS
No. of Patients	18	6	18	4	6	7	5

Table 5: Various Surgical Methods Done In Study Group

Surgery	No. of Patients	Incidence
SMD	8	12
Partial Inferior Turbinectomy	5	8
Inferior Turbinoplasty	5	8
Middle Meatus Antrostomy	8	12
Ethmoidectomy	8	12
Intra-Nasal Polypectomy	4	6.4
Frontal Sinusotomy+ Sphenoidotomy	2	3.2
Septoplasty	6	8.8
SMD+ Septoplasty	6	10.4
Septoplasty+MMA	7	11.2
Septoplasty+Polypectomy+SMD	5	8

Table 2: Success Rate in Various Surgeries Against symptomology

Surgeries	Symptoms			
	Nasal obstruction	Rhinorrhoea	Headache	Postnasal Drip
SMD	85%	76.5%	51%	-
Partial Inferior Turbinectomy	90%	80.2%	60.5%	66%
Inferior Turbinoplasty	100%	80%	80%	-
MMA	92%	84%	50%	80.8%
Intranasal Polypectomy	100%	82%	83.8%	78%
Frontal Sinusotomy + Sphenoidotomy	76%	67%	50%	60%
Septoplasty	90.4%	74%	75.3%	67%
SMD + Septoplasty	85%	80.6%	67%	67.4%
Septoplasty + MMA	90%	75.4%	91%	83%
SMD + Septoplasty + Polypectomy	90%	81%	67%	80.4%

64 cases of with moderate to severe allergic rhinitis symptoms and in those the medical line of management

failed and recurrent symptoms existed were selected were studied over a period of two year between 2015 - 2017

In the present study, Patient aged between 20 years to 55 years with moderate to severe allergic rhinitis symptoms were included and the most common age group was 30-40 years.

The results of the present study indicates that the commonest symptom was combination form that is sneezing, nasal obstruction and Rhinorrhoea which is correlated with study by Sur DK, Scandale S; Scandale³.

Surgical outcome or success rate of various surgeries are - Nasal obstruction due to hypertrophied inferior turbinate best relieved by inferior turbinoplasty and success rate is almost 98% in contrary with 80% in the study by Ophir D, Schindel D, Halperin D, Marshak G⁴. Headache and Rhinorrhea best relieved by intra nasal polypectomy and middle meatus antrostomy⁵.

4. Conclusion

Allergic Rhinitis is commonly seen in age group of 31-40 years. The commonest presentation is combination of nasal obstruction, sneezing, Rhinorrhoea. The commonest finding is hypertrophied inferior turbinate producing nasal obstruction. So, turbinate reduction is done by various turbinate reduction procedures like SMD, partial inferior turbinectomy, inferior turbinoplasty. The best result obtained is by inferior turbinoplasty which gives almost complete relief. Symptoms are effectively controlled giving maximum result if there are associated conditions like DNS, Polyposis, Sinusitis; corrected by appropriate surgeries like Septoplasty, endoscopic polypectomy and FESS.

References

[1] Small P, Frenkiel S, Becker A, Boisvert P, et.al., The Canadian Rhinitis Working Group: Rhinitis: A practical

- and comprehensive approach to assessment and therapy.
J Otolaryngol 2007, 36(Suppl 1):S5-S27.
- [2] Dykewicz MS, Hamilos DL: Rhinitis and sinusitis. J Allergy Clin Immunol 2010, 125:S103-115.
- [3] Sur DK, Scandale S; Scandale (June 2010). "Treatment of allergic rhinitis". *Am Fam Physician* 81 (12):1440-6.
- [4] Ophir D, Schindel D, Halperin D, Marshak G. Long-term follow-up of the effectiveness and safety of inferior turbinectomy. *Plast.Reconstr. Surg.* 1992;90(6):980-4.
- [5] Chhabra N, Houser SM: Surgical options for the allergic rhinitis patient. *Curr Opin Otolaryngol Head Neck Surg.* 2012 Jun;20(3):199-204

Author Profile

DR. Harinarayana. N is MBBS, MS (ENT), Assistant professor in SVS Medical College & Hospital, Mahabubnagar, Telangana state. Completed MBBS & MS (ENT) from Kakathiya Medical College, Warangal,

Dr. Shreya Mahendra is MBBS, Post Graduation Student, Pursuing MS ENT in SVS Medical College & Hospital, Mahabubnagar, Telanaga State.

