

Original article:

Retrospective Analysis of Patients with Allergy Sinusitis

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Abstract:

Background: Sinusitis is generally triggered by a viral upper respiratory tract infection, with only 2% of cases being complicated by bacterial sinusitis. Nasal allergy is statistically related to inflammatory chronic sinusitis as a risk factor. Hence; we planned the present retrospective study to assess the profile of patients suffering from allergy sinusitis.

Materials and Methods: We planned the present study to evaluate profile of patients reporting with allergy sinusitis. A total of 50 patients were included in the presents study. Complete demographic details of all the patients were obtained retrospectively from the data records. We compiled the symptoms and their durations of all the patients from their data files. Clinical profile of the patients was recorded. All the results were analyzed by SPSS software.

Results: Mean age of the patients of the present study was 38.4 years. Reactive airway history was the most common associated medical history, found to be present in 64 percent of the patients. Other commonly encountered medical problems were anemia, middle ear disease, eczema etc. Common symptoms seen in sinusitis patients were nasal obstruction, congestion and cough.

Conclusion: Allergy sinusitis represents a common problem encountered by medical practitioners with variety of common symptoms.

Keywords: Allergy Sinusitis, Profile, Retrospective.

INTRODUCTION

Sinusitis is one of the most common diagnoses in primary care. It causes substantial morbidity, often resulting in time off work, and is one of the commonest reasons why a general practitioner will prescribe antibiotics.¹ Sinusitis is generally triggered by a viral upper respiratory tract infection, with only 2% of cases being complicated by bacterial sinusitis. Most general practitioners rely on clinical findings to make the diagnosis. Signs and symptoms of acute bacterial sinusitis and those of a prolonged viral upper respiratory tract infection are closely similar, resulting in frequent misclassification of viral cases as bacterial sinusitis.²⁻⁴

Nasal allergy is statistically related to inflammatory chronic sinusitis as a risk factor. But one question still remains unanswered: are the reactions and modifications observed in the sinuses after natural exposure to a nasal allergen or after nasal allergen challenge linked to an IgE mediated mechanism? Similarities in symptoms, eosinophils and mediators of inflammation in the mucosa have been found between allergic rhinitis and sinusitis.^{5,6} The same applies for the deposition of Major Basic Protein (MBP) and treatment results, especially when topical steroids are found. Many common chronic inflammatory rhinosinusitis conditions (hypertrophic sinus disease [HSD]) have the histopathological profile of allergic or asthmatic inflammation.^{7,8}

Hence; we planned the present retrospective study to assess the profile of patients suffering from allergy sinusitis.

MATERIALS AND METHODS

We planned the present study in the department of Oto Rhino Laryngology of Govt. S.K. Hospital, Sikar, Rajasthan, and it included evaluation of profile of patients reporting with allergy sinusitis. A written consent was obtained after explaining in detail the entire research protocol. A total of 50 patients were included in the presents study. Complete demographic details of all the patients were obtained retrospectively from the data records. We compiled the symptoms and their durations of all the patients from their data files. Exclusion criteria for the present study included:

- Patients with presence any other form of sinusitis other than allergy sinusitis,
- Patients with presence of comorbid condition,
- Patients whose complete data records were missing

Clinical profile of the patients was recorded. All the results were analyzed by SPSS software. Chi-square test was used for assessment of level of significance. P- value of less than 0.05 was taken as significant.

RESULTS

In the present study, we analyzed the data records of a total of 50 patients with allergy sinusitis, out of which, 28 were males and the remaining were females. Mean age of the patients of the present study was 38.4 years. Reactive airway history was the most common associated medical history, found to be present in 64 percent of the patients. Other commonly encountered medical problems were anemia, middle ear disease, eczema etc. Common symptoms seen in sinusitis patients were nasal obstruction, congestion and cough. However; we didn't observe any significant result while comparing the symptoms experienced by the patients.

DISCUSSION

In the present study, we observed that reactive airway history was the most common associated medical history, found to be present in 64 percent of the patients. Other commonly encountered medical problems were anemia, middle ear disease, eczema etc. Common symptoms seen in sinusitis patients were nasal obstruction, congestion and cough. However; we didn't observe any significant result while comparing the symptoms experienced by the patients. Bertrand B et al conducted an original study among 106 patients (24 patients allergic to perennial allergens, 82 non allergic patients) suffering from bilateral chronic inflammatory (no polyposis) ethmoidal sinusitis. The allergic group was submitted to a 3 months antiallergic treatment (Cetirizine 10 mg once a day, Beclomethasonedipropionate 50 micrograms three times a day) before being referred for bilateral endonasalethmoidectomy under endoscopic control. Scores for rhinorrhea, nasal obstruction and global comfort (global assessment) were compared before and after ethmoidectomy. Both groups were significantly improved by surgery. Comparing both groups, no significant difference was found before and after surgery regarding the three above mentioned parameters. This suggests that 1) symptoms are common to both perennial nasal allergy and chronic ethmoidal sinusitis, 2) medical treatment failure in allergy must require a CT scan of the sinuses to assess a possible accompanying chronic sinusitis, 3) chronic ethmoidal sinusitis is probably the leading factor responsible for nasal symptoms such as rhinorrhea and nasal obstruction when associated with perennial allergy.⁹ Gutiérrez C et al described the teamwork of otolaryngologists and bronchopulmonary specialists in patients with cystic fibrosis. They

performed a descriptive, retrospective study over the last 17 years, which included 14 patients with chronic rhinosinusitis and cystic fibrosis attended at a private hospital. Of the patients, 64% were male and the median age was 23 years. The most frequent mutations found were $\Delta F508$, M470 and R553. All of the patients with $\Delta F508$ mutation had nasal polyps. 100% of the patients had clinical findings of chronic rhinosinusitis. All the patients had had endoscopic nasal surgery. The median number of endoscopic surgeries was 2. Given the high prevalence of chronic rhinosinusitis in patients with cystic fibrosis, everyone should have a computed tomography scan of the paranasal sinuses during the initial assessment, considering that sinus germs are the ones that colonise the lower airway. The otolaryngologist should be part of the cystic fibrosis team.¹⁰ Iseh KR et al assessed the clinical pattern and outcome of conventional management measures of rhinosinusitis. All new patients with the diagnosis of rhinosinusitis over a 2-year period from July 1999 to July 2001 were analyzed for clinical features, conventional radiological findings, and treatment modalities over a period of 3 years follow up. There were 195 (11.7%) new cases of rhinosinusitis out of a total number of 1661 patients seen over the period under review. Only 146 case notes were accessible for the study. Eighty-four (57.5%) were males and 62 (42.5%) were females. Their ages ranged from 7 months to 70 years. The main clinical symptoms and signs were nasal discharge or rhinorrhea (84.9%), nasal obstruction (24.7%), epistaxis (22.0%), and sneezing (20.6%). The duration of symptoms ranged from few days to about 10 years with 24 (16.4%) being acute cases while 122 (83.6%) were chronic cases giving a prevalence of 1.4% and 7.3%, respectively. Maxillary sinus (58.9%) was the commonest sinus involved. More than one sinus involvement accounted for 37.7% of the cases. Infective causes accounted for 67.1% of cases followed by allergy (28.8%). There were complications in 21 (14.4%) cases with orbital involvement (33.3%) being the commonest complication. Mode of treatment were medical (86.3%), and conventional surgery was carried out in 13.7% of the cases for either failed medical treatment or associated complications. Facial paraesthesia along the sites of surgery was the commonest complications, otherwise the outcome of treatment was excellent. Rhinosinusitis in this region was more of chronic (83.6%) variety than acute (16.4%) variety. Infective causes (67.1%) and allergy (28.8%) were the commonest etiological factors. About (86.3%) were amendable to medical treatment while surgical treatment was carried out in 13.7% of the cases. Rhinosinusitis should be managed medically first before recourse to surgical measures in carefully selected cases.¹¹ Emanuel IA et al conducted a study to improve understanding of the relative roles of perennial and seasonal allergens in the cause of chronic rhinosinusitis. A retrospective review of 200 consecutive patients was carried out on patients who had chronic rhinosinusitis refractory to medical therapy and who subsequently underwent functional endoscopic sinus surgery. All of these patients had allergy testing for common perennial and seasonal inhalant allergens before surgery. Each patient had sinus CT imaging before undergoing the surgery. The CT scans of each patient were staged according to a validated, standardized grading system by investigators blinded to allergic profile. Allergy testing indicated that 84% of all patients tested positive for allergies. Moreover, 60% of all patients had significant allergic sensitivity; 52% of all patients had multiple allergen sensitivities. Furthermore, there was a predominance of perennial allergens, especially house dust mite over seasonal allergens. The vast majority of our patients undergoing functional endoscopic sinus surgery had concomitant allergy. This study highlighted the potential contribution of perennial allergies to the development of rhinosinusitis.¹²

CONCLUSION

From the above results, the authors conclude that allergy sinusitis represent a common problem encountered by medical practitioners with variety of common symptoms. Therefore, medical specialists should have adequate knowledge of the routinely encountered clinical profile, so that early detection and treatment could be done in those patients.

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Table 1: Demographic details of the patients

Parameter		Number
Mean age (years)		38.4
Gender	Males	28
	Females	22

Graph 1: Past medical history

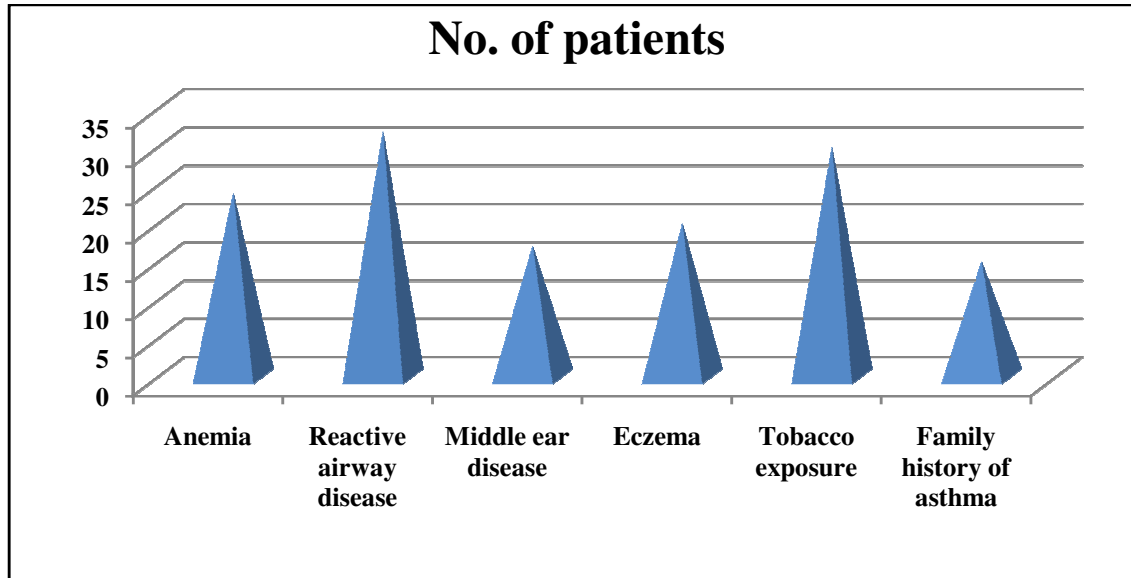


Table 2: Common symptoms experienced by the patients

Common symptoms	No. of patients	p-value
Nasal obstruction	18	0.74
Congestion	24	
Cough	22	
Others	5	

Graph 2: Common symptoms experienced by the patients

