

Original Research Article

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Benign lesions of the nose: a comprehensive study

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ABSTRACT

Background: Benign lesions of the nasal cavity represent a diverse group of pathologies. Furthermore, each of these disorders may present differently in any given patient as pain and discomfort, epistaxis, headaches, vision changes, or nasal obstruction.

Methods: This study was carried out in a tertiary care center in India from October 2016 to March 2018. A total of 80 patients of age 10 years to 80 years were included. Detailed history and complete ENT examination including radiological studies was done. Patients were subjected to diagnostic nasal endoscopy and biopsy followed by histopathological examination. Depending on the diagnosis, medical or surgical treatment or combination of both was administered.

Results: In present study the commonest presenting complaint was found to be nasal blockage found in 76% of cases, followed by rhinorrhea in 40%, nasal mass in 30%, epistaxis in 16%, cheek swelling in 5%. Out of 80 benign lesions, polyp was noted in 65 cases, hemangioma in 8 and inverted papilloma in 3 cases. Out of 65 cases of polyps, 52 were antrochoanal, 10 ethmoidal and 3 maxillary. Medical treatment was given in ethmoidal polyp cases, out of which 5 were cured. Most common surgery was polypectomy. Lateral rhinotomy was done in 6 cases

Conclusions: Patients with benign lesions of the nose commonly presented in the second and third decade with slight male preponderance. Antrochoanal polyps are most common. Medical treatment works to a certain extent in patients with ethmoidal polyposis and surgery is the mainstay of treatment in the benign lesions of the nose.

Keywords: Ethmoidal polyposis, Antrochoanal polyp

INTRODUCTION

The lesions in nasal cavity and paranasal sinuses have inflicted man from time immemorial. The nasal cavity, nasopharynx and paranasal sinuses form functional unit of nose and is principally involved in filtering, humidifying and adjusting the temperature of inspired air.^{1,2}

Benign lesions of the nasal cavity represent a diverse group of pathologies. Furthermore, each of these disorders may present differently in any given patient as

pain and discomfort, epistaxis, headaches, vision changes, or nasal obstruction. Despite these nasal masses being benign, many of them have a significant capacity for local tissue destruction and symptomatology secondary to this destruction.

It may be difficult to distinguish clinically between polypoidal mass lesions and so it is important that all polypoidal masses removed from nose and paranasal sinuses must be subjected to histopathological examination. Thus a careful histopathological examination is required for any particular lesion. The

management may include conservative management, medical and surgical management.

This is a comprehensive research including the most common benign lesions of the nasal cavity encountered by the otolaryngologists and a discussion of their management.

METHODS

This study was carried out in a tertiary care center in India from October 2016 to March 2018. A total of 80 patients of age 10 years to 80 years were included.

Inclusion criteria

Inclusion criteria were patients presenting with a mass in nose.

Exclusion criteria

Exclusion criteria were patients with lesions of nasopharyngeal origin extending to nose and paranasal sinuses; mass lesion due to specific infections like rhinosporidiosis, etc., rhinolith.

Detailed history was obtained from all the patients included in the study. They were asked about their demography, social habits, and socioeconomic factors and associated diseases. Complete ENT examination was done and complications were ruled out. Provisional / clinical diagnosis was made on basis of history and clinical examination. Patients were subjected to routine laboratory investigations with specific emphasis on HB, CBC, RBS, ESR, VDRL, ELISA. Patients were subjected to diagnostic nasal endoscopy and biopsy followed by histopathological examination of the same. Routine Radiological studies like x-rays and computed tomography were done. Depending on the diagnosis, medical or surgical treatment or combination of both was administered. Results were statistically analyzed with SPSS software.

RESULTS

In present study we found that 45% were in the second and third decade and 5% of patients were found in the age group of <10 years.

In present study we found male: female ratio of 1.3:1.

The commonest presenting complaint was found to be nasal blockage found in 76% of cases, followed by rhinorrhea in 40%, nasal mass in 30%, epistaxis in 16%, cheek swelling in 5%. Ulcer over cheek or palate is found in 4% cases.

In the present study, clinically benign lesions were found in 73% cases.

Table 1: Age wise distribution of lesions of nose and paranasal sinuses.

Age (in years)	No. of patients	Percentage of total patients
<10	4	5
11-20	22	28
21-30	20	25
31-40	16	20
41-50	8	10
51-60	7	9
61-70	2	2
71-80	1	1
Total	80	100

Table 2: Symptomatology of patients with benign lesions of nose.

Symptoms	No. of cases	Percentage (%)
Nasal blockage	76	76
Rhinorrhoea	40	40
Nasal mass	30	30
Epistaxis	16	16
Cheek swelling	5	5
Ulcer	4	4
Proptosis	2	2

Table 3: Histopathology of benign lesions.

Type of lesion	Cases	Percentage of total cases
Benign	15	19
Polyps	65	81
Total	80	100

Out of 80 benign lesions, polyp was noted in 65 cases, hemangioma was noted in 8, inverted papilloma in 3 cases. One case each of schwannoma, pyogenic granuloma, mucocoele and haemangiopericytoma was noted. According to the histopathological reports, polyps were most common (65% cases).

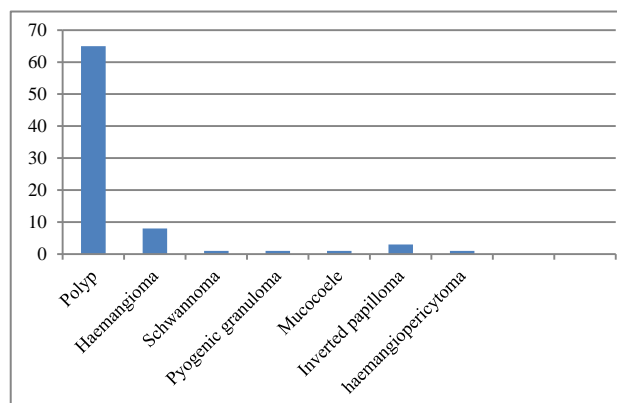


Figure 1: Histopathology of benign lesions.

Out of 65 cases of polyps, 52 were antrochoanal, 10 were ethmoidal and 3 were maxillary.

The polyps were seen in 65% cases where 34% were men and 31% were women. Amongst ethmoidal polyp 6 were men and 4 were women and all 3 maxillary polyp were men.

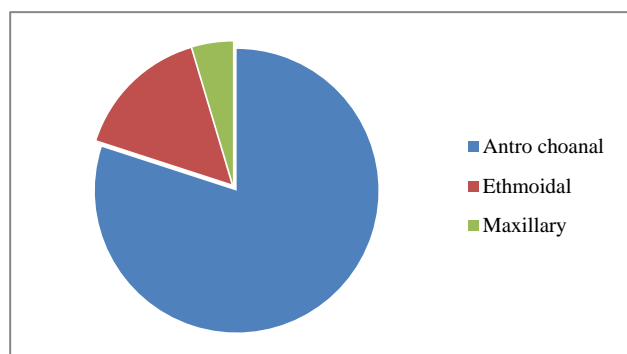


Figure 2: Types of polyps.

Medical treatment in the form of topical steroids was given in ethmoidal polyp cases. 5 cases of ethmoidal polyposis were cured by topical steroids. Surgery was the most common modality of treatment employed for nose and paranasal sinuses. Most common surgery employed was polypectomy in our study as our studies had most common cases as polyps. Lateral rhinotomy was done in 3 inverted papilloma cases, 2 polyp cases and 1 case of schwannoma.

DISCUSSION

In present study, we found maximum number of patients 45% in the second (28%) and third decade (25%), whereas only 9% patients were found in the age group above 60 years and only 2.5% patients were found in less than 10 years.

Bhople et al found highest age incidence in second decade (23%) and in fourth decade (20%).³ Narayan Swamy et al found 36% cases in second decade and 20% cases in third decade.⁴

Table 4: Table showing gender ratio in different studies.

Study	Gender ratio
Bhople et al ³	1.1:1
Narayan Swamy et al ⁴	2.75:1
Zafar et al ⁵	1.7:1
Present study	1.3:1

In present study 53% patients were male and 47% were female and male to female ratio was 1.3:1. Bhople et al found male to female ratio of 1.1:1, which is comparable to our study.³ Whereas, Swamy et al found 22 male

patients out of 30 in their study.⁴ Zafar et al found male to female ratio of 1.7:1.⁵

In present study for polyps, male: female ratio was 1.1: 1. Hemangiomas were found more in women i.e. in 6 out of 7 patients. The other benign lesions like schwannoma, pyogenic granuloma, mucocoele and haemangiopericytoma were less in number to conclude. Bhople et al reported male to female ratio of nasal masses as 1.1:1.³ For benign lesion as 2:1, and for polyps 0.9:1.

Table 5: Comparison of histopathology of benign lesions in different studies.

Lesions	Bhople et al ³	Present study
Polyps	0.9:1	1.1:1
Benign	2:1	1:1

Nasal blockage was found as most common presenting complaint in 76% of cases in our study. Other symptoms found were rhinorrhoea in 40%, nasal mass in 30%, epistaxis in 16%, ulcer in 4%, and proptosis in 2% of the cases. Whereas, Swamy et al found nasal blockage in 76% of cases which is comparable to our study.⁴ They found other symptoms like epistaxis in 53%, nasal discharge in 50%, nasal mass in 40% of cases. Bhople et al found nasal obstruction as the commonest clinical feature, followed by swelling over cheek, epistaxis and nasal discharge.³

In present study, we found 80% benign lesions. The various benign lesions found were haemangioma 7%, and schwannoma, maxillary mucocoele, haemangiopericytoma 1%. Inverted papilloma was seen in 3% cases. In a study by Swamy et al studied 240 cases.⁴ Of which 145 were non - neoplastic lesions. Of non neoplastic lesions they found 119 cases of polyps (82.6%). The other non - neoplastic lesions found were rhinoscleroma, tuberculosis, fungal infection, fibrous dysplasia, ossifying fibroma, cysts, nasal glioma and cemento-ossifying fibroma. In our study the lesions due to specific infections were excluded. We did not come across any case of cyst or fibrous dysplasia.

Bhople et al found 45 cases (52.3%) of polyps, of which 2 were ethmoid polyps, 14 were maxillary polyps and 29 were arising from nasal cavity.³ In present study, we found 65% cases of polyps, of which 10 cases of ethmoid polyps and 3 limited to maxillary region and 52 cases were of antrochoanal polyp. Ethmoidal polyps in initial stages were given intranasal steroid spray and extensive lesions were treated by polypectomy and endoscopic sinus surgery. 5 cases of ethmoidal polyposis responded to steroids and 5 underwent surgery in addition. 3 maxillary polyps were removed by Caldwell Luc operation. In 50 cases only polypectomy was done and in two cases of extensive polyposis lateral rhinotomy was done.

Dasgupta et al found 62.8% cases of polyps.⁶ Amongst the benign lesions they found haemangioma (45.7%) as commonest lesion and males were twice commonly affected than females. Swamy et al found 3 haemangiomas out of 13 vascular tumours.⁴ The age group varied from 19-34 years. Male to female ratio found was 1:2. Haemangiomas constituted 7% cases in present study and these cases presented with bleeding polypoidal masses mainly in <30 years age group. We found 6 out of 7 cases to be women and thus male to female ratio 0.16:1.

CONCLUSION

Patients with benign lesions of the nose commonly presented in the second and third decade. Slight male preponderance is present as far as benign lesions of the nose are concerned. Antro choanal polyps are most common polyps, and haemangioma was most common benign lesion. Histopathology was taken as final diagnosis. Medical treatment works to a certain extent in patients with ethmoidal polyposis and surgery is supposed to be the mainstay of treatment in the benign lesions of the nose.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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