

# A Clinicopathological Observational Study of Various Types of Masses at Nasal Cavity, Paranasal Sinuses and Nasopharynx.

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## ABSTRACT

**Background:** The nasal masses affect different age groups and have the aetiological factors, which are both congenital and acquired. In the present study we have observed Various Types of Masses at Nasal Cavity, Paranasal Sinuses and Nasopharynx. **Methods:** The present study was based on the observation of 100 patients of different age group having chief complaint of fleshy mass in the nasal cavity who were selected from outpatient department. **Results:** In the study of 100 patients, 49 were children and adolescent, 32 were adult, 17 were middle aged and remaining 2 were elderly. 83.9% of Antrochoanal polyp were found below 20 year age group and 90.9% of ethmoidal polyp were found in above 21 year age group and 9 out of 42 cases of polyp gave history of allergy and 6 (14.3%) cases out of 42 having DNS. **Conclusion:** Sinonasal polyposis is the most common pathological nasal mass and of these antrochoanal polyp is usually seen in children and adolescent and ethmoidal polyp is common in the middle age group.

**Keywords:** Nasal mass, Nasopharynx, Paranasal sinus.

## INTRODUCTION

The swelling of nasal cavity have inflicted man from time immemorial and is one of the commonest presentations of the nasal diseases. The nasal masses affect different age groups and have the aetiological factors, which are both congenital and acquired.

In most of the patient nasal polyp are fairly common, among the tumours, in the benign group squamous papilloma and angiofibroma are quite common.

Nasal blocked is the most common complaint by patient with fleshy mass in the nasal cavity and followed by nasal discharge and bleeding from nose.

A detailed history, clinical evaluation and investigation are essential part workup of patients, so that a correct and timely intervention can be done.

The objective of this study was to study the different kinds of fleshy masses in the nasal cavity and to find out their various causative factors and their relative incidence with respect to age.

The present study was conducted in the department of otorhinolaryngology, Teerthankar Mahaveer medical college and research center, Moradabad, U P.

The present study was based on the observation of 100 patients of different age group having chief complaint of fleshy mass in the nasal cavity who were selected from outpatient department.

In the study of 100 patients, 49 were children and adolescent, 32 were adult, 17 were middle aged and remaining 2 were elderly.

Each case after being screened from the outpatient department were clinically evaluated by taking clinical history, general physical examination, complete local ENT examination, followed by various investigation like computed tomography and contrast study. All cases were biopsied and diagnosis was confirmed by HPE.

## RESULTS

Following observation were made after studying 100 cases presenting as fleshy mass in the nasal cavity.

[Table 1] shows that out of 100 cases of fleshy mass in the nasal cavity, the maximum number(42 cases) was of sinonasal polyp out of which 31(73.8%) were of Antrochoanal polyp where as rest 11(26.2%) were of ethmoidal polyp.

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## MATERIALS AND METHODS

83.9% of Antrochoanal polyp were found below 20 year age group and 90.9% of ethmoidal polyp were found in above 21 year age group and 9 out of 42 cases of polyp gave history of allergy and 6 (14.3%) cases out of 42 having DNS. R K Chandrda and B M Abrol (1974) had suggest similar finding regarding existence of allergy with infection to be causative of sinonasal polyp.<sup>[1]</sup>

Inferior turbinate hypertrophy was found in the cases in children, adolescent and adults of which in 10

were having U/L and 7 were having B/L hypertrophy turbinates and all of them were having the history of allergy to dust, pollens, perfumes etc. Among 17 cases of rhinosporodiosis 13 (76.47%) cases were between 21-40 year, 2(11.76%) were between 0-20 year, 2 (11.76%) between 41-60 year. All the 17 had history of taking bath in pond. It was also favoured by a report of Mandlik and Roberts (1937), Caldwell and Rao (1938)<sup>[2]</sup>.

**Table 1: Cause of sinonasal polyp.**

Sl. no.	Causes		Total no.	Age group in years				Relevant history
				0-20	21-40	41-60	>60	
1	Nasal polyp		42	27	6	9	0	Allergy association with DNS, infection recurrent URTI
2	Hypertrophy of inferior turbinate	U/L	10	7	3	0	0	Allergy
		B/L	7	6	1	0	0	
3	Rhinosporidiosis		17	2	13	2	0	Taking bath in ponds
4	Neoplasms		11	4	4	2	1	Trauma-3, DM- 2 idiopathic-5
5	Septal abscess		10	3	2	4	1	
6	Septal hematoma		2	0	2	0	0	Trauma-2
7	Rhinoscleroma		1	0	1	0	0	URT-1
<b>Total</b>			<b>100</b>	<b>49</b>	<b>32</b>	<b>17</b>	<b>02</b>	

**Table 2: Age distribution of sinonasal polyp.**

Sl. No.	Type	Total no.	Age group in years			
			0-20	21-40	41-60	>60
1	Antrochoanal	31	26(83.9%)	2(6.4%)	3(9.7%)	0
2	Ethmoidal	11	1(9%)	4(36.4%)	6(54.5%)	0
<b>Total</b>			<b>27(64.3%)</b>	<b>6(14.3%)</b>	<b>9(21.4%)</b>	

Septal abscess was found in 10 cases ,out of 10 cases 1 was above 60 years with history DM and trivial trauma. 4 cases were between 41-60 year of which 1 was with history of DM and 3 having history of trauma. 3 cases were between 21-40 years and 2 case between 0-20 years in which there was no history of trauma or DM

Septal hematoma was found in 2 cases between 21-40 years, both had history of trauma.

Rhinoscleroma was found in 1 patients aged between 21-40 years with history of upper respiratory tract infection.

Neoplasm: the study included 11 cases of neoplasm .amongst neoplastic cases 9 (81.82%) were benign neoplasm ,where as the malignant cases were 2 (18.18%).

Benign: of these 9 cases of benign tumors, the commonest was of angiofibroma, constituting 5 cases (55.5%) followed by haemangiomas 2 cases (22.2%)

Squamous cell papilloma inverted papilloma were the other benign lesions.

Nasopharyngeal angiofibroma to be the most common benign neoplasm below the age 20 years. Out of the 5 cases 4 were found in the age group below 20 years and only 1 in the age group 20-41 years.

The study included 2 malignant cases and the most common lesion was squamous cell carcinoma, both originating from maxillaryantrum.

**Table 3: Age incidence of neoplasm.**

Sl. No	Types	Age group in years			
		0-20	21-40	41-60	>60
A		Benign			
1	Nasopharyngeal angiofibroma	4	1	0	0
2	Haemangiomas	0	2	0	0
3	Squamous cell papilloma	0	1	0	0
4	Transitional cell papilloma	0	0	0	1
B		Malignant			
1	Squamous cell carcinoma	0	0	2	0
<b>Total</b>		<b>4</b>	<b>4</b>	<b>12</b>	<b>1</b>

## DISCUSSION

The relative incidence of the fleshy masses of nasal cavity is approximately 34% per year as described by various studies previously.<sup>[3]</sup>

The relative incidence shows hospital incidences rather than incidence in general population.

Nasal polyp was the most common lesion observed in this present study, constituting 42% cases.

Of them 31(73.8%) were antrochoanal polyp and the rest 11(26.2%) were of ethmoidal polyp.

The age of presentation of antrochoanal polyp was found below 20 years of age. Maximum number of ethmoidal polyp were found in 41-60 years age group.

Clinical findings: in 6 (14.3%) cases of polyp were associated with DNS and in 9 cases associated history of allergy was found.

The 17 patients of hypertrophy of inferior turbinate. Out of which 10 were having unilateral mass and 7 were having bilateral mass and in both of them most of them presented between age group 0-20 years.

All of them had history of allergy and recurrent upper respiratory tract infection. This was also favored by a report of Caunaetal (1972)<sup>[4]</sup>.

Rhinospordiosis was seen in 17 cases and all were with the history of taking bath in dirty pond.

The age of presentation of rhinospordiosis most common in young adults (21-40) in 76.4% cases. out of 10 cases of septal abscess in most common group affected was of age group 41-60 years of age and uncontrolled DM and history of trauma were significantly associated with septal abscess.

Septal hematoma was found in 2 cases both having history of trauma and presenting age group was 21-40 years. Trauma as major cause as also was advocated by S.H.FRY (1969) and AMBRUS et al (1981)<sup>[5]</sup>.

Rhinoscclorma was found in female of 27 years age 11 cases of neoplasm were observed and out of these 9(81.82%) cases were of benign and 2(18.18%) were of malignant nature

Benign- The age of presentation of 4 cases of angiofibroma were found below 20 years of age and only 1 was found above 20 years. This was favored by a report of martin, Ehrlich and Abels (1948) considered the highest age being 19 years of age<sup>[6]</sup>.

2 cases of papillomas were found, 1 each of squamous cell papilloma and inverted papilloma

Malignant- the age of presentation of both cases of squamous cell carcinoma were found in middle age (41-60 years).This was favored by a report of Watson (quoted by S. C. goldstein and G.A sisson) (1980)<sup>[7]</sup>.

## CONCLUSION

To conclude fleshy nasal mass are a common diagnosis in ENT and there are various diagnosis for these fleshy nasal masses. Sinonasal polyposis is the most common pathological nasal mass and of these antrochoanal polyp is usually seen in children and

adolescent and ethmoidal polyp is common in the middle age group.

Allergy related turbinate hypertrophy, which might be asunilateral, or bilateral is also common study.

Chronic infective condition of nasal cavity namely Rhinosporidiosis, Rhinoscleroma are common among middle age group and associated of rhinosporidiosis with pond bathing were found to be very significant.

Septal abscess and septal hematoma was associated with history of trauma and aggravated due to presence of comorbidities like uncontrolled DM.

Among the various of neoplasm of nasal cavity, most common benign nasal mass was angiofibroma were as squamous cell carcinoma was most common malignant nasal mass.

Knowledge of these nasal mass and there etiologies and age related incidence would definitely encourage the rhinologist and pathologist to get a prompt diagnosis as well as timely management.

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