



## Clinicopathological study of nasal mass with special reference to malignant condition of nose & para nasal sinuses

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### ARTICLE HISTORY

Received: 08.09.2013

Accepted: 19.09.2013

Available online: 10.11.2013

### Keywords:

Nasal mass, Malignant nasal mass.

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### ABSTRACT

To correlate histological finding with clinical manifestations & to diagnose the tumour of nasal cavity early, a retrospective study was done in the Department of ENT, VSS Medical College & Hospital, Burla, Sambalpur, Odisha. 130 cases of mass in nose operated in the ENT OT, VSS Medical college, Burla from 1.1.2012 to 31.12.2012 were selected for evaluation. Their case records were extensively studied. Patient demographics, clinical features & histopathological [HP] study of mass taken out after surgery were analyzed & compared. From this study we find that, Nasal masses were more common in males. Rhinosporidiosis was found to be most common [MC] lesion, followed by antrochoanal [AC] polyp & ethmoid polyp. Squamous [Sq] cell carcinoma was the MC malignant tumour. Unilateral nasal obstruction was the presenting symptom in almost all nasal masses, except ethmoid polyp & some cases of nasopharyngeal mass where it was bilateral.

### INTRODUCTION

Nose is the most prominent feature of the face & often catches the attention of the onlooker, whenever it is deformed or altered in shape. A person with blocked nose can not live life happily, because neither he enjoys a sumptuous dish nor he can realize any pleasant fragrance. Frequently patients attend ENT clinic with complaints of nasal obstruction, nasal discharge, nasal bleeding, anosmia etc. In many cases this may be due to a mass in nose. The mass may be an inflammatory swelling, a benign tumour or a malignant growth. Because of the close relation of the nose & PNS to various important structures, malignant diseases of nose & Para Nasal Sinuses (PNS) easily spread to these structures with devastating results even before distant metastasis occurs.

The present work is undertaken with a view to correlate the clinical manifestations with histological findings, so that the tumours can be diagnosed early.

### MATERIAL & METHODS

This study has been conducted in the Dept. of ENT VSS Medical college, Burla. The total number of patients operated in ENT OT for nasal mass from the period 01.01.2012. to

31.12.2012 was 130. Their case records were extensively studied giving emphasis over the patient demography & clinical features. HP reports of all cases done after surgery were correlated with the clinical manifestations. This results were compared with the study done by various other researchers.

### RESULTS & DISCUSSION

The total numbers of cases of nasal mass were 130. Out of this 94 [73%] were non neoplastic & 36 were neoplastic. From this 36 cases 28 were benign & 8 [5.38%] were malignant. So it is evident that benign disease of nose & PNS are more common than malignant conditions. This is in accordance with study by Lewis et. al [1].

Table 1 - HP study shows the maximum number of nasal mass [34.61%] were rhinosporidiosis followed by AC polyp [16.92%] & ethmoid polyp 13.84%. These findings are comparable with the study by Bahadur et al. [2]. Bahadur et al. reported that MC malignant mass of nose is Sq. cell carcinoma.

Considering the malignant conditions of nose & PNS the MC is Sq. cell carcinoma of maxillary sinus [37.5%], followed by Sq. cell carcinoma of nose [25%] & then adenocarcinoma of maxillary sinus [12.5%], Sq. cell carcinoma of ethmoid sinus [12.5%] & adenoid cystic carcinoma of maxillary sinus [12.5%].

Table 2 - Nasal masses are more common in 2nd decade of life

**Table 1: TOTAL NUMBER OF NASAL MASS**

Types of nasal mass		No. of cases	Percentage
Non neoplastic		94	73.00%
Neoplastic	Benign	28	21.52%
	Malignant	8	5.38%

**Table 2: INCIDENCE OF VARIOUS TYPES OF NASAL MASS**

Sl. No.	Types of mass	Total no. Of cases	Percentage [%]
<b>Non neoplastic</b>			
1	Rhinosporidiosis	45	34.61
2	Antrochoanal polyp	22	16.92
3	Ethmoidal polyp	18	13.84
4	Cyst	5	3.84
5	Fungal granuloma	4	3.07
<b>Benign tumors</b>			
6	Hemangioma	10	7.7
7	Squamous cell papilloma	6	4.6
8	Fibroma	3	2.3
9	Angiofibroma	3	2.3
10	Inverted papilloma	3	2.3
11	Neurofibroma	1	0.76
12	Ossifying fibroma of maxilla	1	0.76
13	Pleomorphic adenoma	1	0.76
<b>Malignant tumors</b>			
14	Sq cell CA maxillary sinus	3	2.3
15	Sq cell CA nose	2	1.53
16	Sq cell CA ethmoid	1	0.76
17	Adenoid cystic CA maxilla	1	0.76
18	Adenocarcinoma maxillary sinus	1	0.76

followed by 3rd decade of life. This is in accordance with the study by Iqbal & Dani [3]. Malignant nasal masses are more common in 5th decade of life. Sharma et al. [4] in their series found peak incidence of malignancy in 5th & 6th decade.

Table 3 - Incidence of nasal masses is higher in males[63.84%]. Rhinosporidiosis too predominates in males[71%]. This is in accordance with the study by Iqbal & Dani [3].

Table 4 - 55% of cases presented with unilateral & 19.2% of cases presented with bilateral nasal obstruction. Next MC features are epistaxis, sneezing, headache & anosmia. These findings are comparable with the study of Satyanarayan et al[5].

Table 5 - In neoplastic nasal masses nasal obstruction was present in all cases followed by nasal discharge, epistaxis, facial pain, facial swelling etc. These observations are in accordance with the study by Tandon et al. [6].

**Table 3:** AGE INCIDENCE

Sl no	Types of mass	0 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60
		<b>Non neoplastic</b>					
1	Rhinosporidiosis	3	15	10	8	8	1
2	AC polyp	2	9	6	5		
3	Ethmoid polyp		4	5	6	2	1
4	Cyst	1	1	2	1		
5	Fungal granuloma			2	2		
		<b>Benign tumor</b>					
6	Hemangioma	2	3	2	2	1	
7	Sq cell papilloma		2	1	3		
8	Fibroma			2	1		
9	Angiofibroma		3				
10	Inverted papilloma					1	2
11	Neurofibroma		1				
12	Ossifying fibroma of maxilla				1		
13	Pleomorphic adenoma				1		
		<b>Malignant tumors</b>					
14	Sq cell CA maxilla					1	2
15	Sq cell CA nose						2
16	Sq cell CA ethmoid					1	
17	Adenoid cystic CA maxilla						1
18	Adenocarcinoma maxillary sinus						1

**Table 4:** SEX INCIDENCE

Sl. No.	Types of mass	Male		Female	
		No of cases	Percentage	No of cases	Percentage
		Non neoplastic			
1	Rhinosporidiosis	32	71	13	9
2	Antrochoanal polyp	12	54.5	10	45.5
3	Ethmoidal polyp	10	55.5	8	45.5
4	Cyst	3	60	2	40
5	Fungal granuloma	3	75	1	25
		Benign tumors			
6	Hemangioma	4	40	6	60
7	Squamous cell papilloma	3	50	3	50
8	Fibroma	2	66	1	33
9	Angiofibroma	3	100		
10	Inverted papilloma	3	100		
11	Neurofibroma	1	100		
12	Ossifying fibroma of maxilla			1	100
13	Pleomorphic adenoma	1	100		
		Malignant tumors			
14	Sq cell CA maxillary sinus	2	66.66	1	33.33
15	Sq cell CA nose	2	100		
16	Sq cell CA ethmoid			1	100
17	Adenoid cystic CA maxilla	1	100		
18	Adenocarcinoma maxillary sinus	1	100		

**Table 5:** SYMPTOMS OF NON NEOPLASTIC MASS

Sl no	Type of mass	Nasal obstruction		Epistaxis	Sneezing	Headache	Anosmia
		Unilateral	Bilateral				
		Non neoplastic					
1	Rhinosporidiosis	40	10	38	10	8	4
2	AC polyp	22			11	10	2
3	Ethmoid polyp	4	15		12	12	4
4	Cyst	2					
5	Fungal granuloma	4			3	1	1

## CONCLUSION

From the above study we conclude that rhinosporidiosis was found to be the MC lesion among nasal mass, followed by AC polyp & ethmoid polyp. MC malignant tumour is Sq. cell carcinoma. Nasal masses are more common on 2<sup>nd</sup> decade followed by 3<sup>rd</sup> decade. Malignancy of nose & PNS are found in 5<sup>th</sup> - 6<sup>th</sup> decade of life. Nasal masses are more common in males. Unilateral nasal obstruction was the MC presenting symptom. As per malignant condition of nose & PNS are concerned, early detection remains the key. As most of these conditions have late presentation, all nasal masses should be examined thoroughly. The combined efforts of the surgeon & the pathologist is required for proper diagnosis & management.

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