

**Original article:**

**Study of clinical profile of nasal masses with special reference to clinical presentation**

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**Abstract:**

**Introduction:** The lesions affecting the nasal passages are noticed earlier because of the complaint of nasal obstruction, nasal discharge, epistaxis and disturbances of smell. With this background present work was planned to study of clinical profile of nasal masses with special reference to clinical presentation

**Materials and methods:** The present study was carried out 112 patients in out patients and its patients of ENT department from rural medical college.

The study was approved by Institutional ethical committee. The sample size was estimated with the help of expert statistician. The inclusion and exclusion criteria were confirmed.

**Results:** Among non neoplastic polypoidal nasal masses 69.44% presented with multiple mass and 30.55% presented with a single mass. All benign and malignant nasal polypoidal masses were found to be single except in one malignant case.

**Conclusion:** In the present study nasal obstruction mainly unilaterally was seen in inflammatory polypi and bilaterally in allergic polypi.

**Keywords:** Nasal mass , Nasal obstruction

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**Introduction:**

The lesions affecting the nasal passages are noticed earlier because of the complaint of nasal obstruction, nasal discharge, epistaxis and disturbances of smell. Nasal masses form a larger domain of patients of nasal obstruction seen in day to day ENT out patient departments. <sup>1</sup>

The various clinical entities presenting with nasal obstruction are nasal polyposis, impacted foreign bodies, rhinolith, rhinoscleroma, rhinosporidiosis, angiofibroma, trauma, and benign and malignant diseases of nose and paranasal sinuses. A sinonasal leiomyomas are very rare lesion, only 20 cases being described in literature till date. They are purplish masses on inspection. Chondromas can occur

anywhere in nose and sinuses. The difference between benign and malignant is difficult to predict histologically. So the one which metastasis are malignant and one not benign! <sup>2</sup> Fibrous dysplasia has female preponderance and is first diagnosed in infancy or early childhood, presenting as painless slow growing swelling typically over maxilla, palate, nasal cavity progressing to deformity. <sup>2</sup>

Malignancies of the nose and paranasal sinuses are potentially dangerous disease increasing morbidity and mortality, requiring vigorous form of treatment like excision in total / radical with or without radiotherapy and/ or chemotherapy. Midline granuloma of the nose requires urgent attention. <sup>3</sup> The other specific granulomatous lesions of the nose

which are found commonly in India are rhinosporidiosis, lupus vulgaris and leprosy. <sup>2</sup> Embryologically the nose and nasal passages are formed by the fusion of multiple processes leading to some of the rarer diseases which present as nasal masses, these are dermoid, encephalocele, meningocele, nasal glioma, haemangioma. The detail correlative study of all these conditions is necessary to evaluate their age and sex incidence, to study various clinical presentation and correlate them with histopathological findings, and to study various treatment modalities and their efficacy. With this background present work was planned to study of clinical profile of nasal masses with special reference to clinical presentation .

**Materials and methods**

The study was carried out 112 patients, both in out patients and its patients of ENT department Rural Medical College and Hospital, Loni . The study was approved by Institutional ethical committee. The sample size was estimated with the help of expert

statistician. The inclusion and exclusion criteria were confirmed.

The cases belonged to various places in and around Loni, Dist.Ahmednagar and Dist. Nashik.

The criterion for selection of cases was manly based on history at clinical examination. Later these cases were thoroughly investigated and appropriate management was under taken after establishing the final diagnosis.Detail history was taken regarding the patients complaints mainly nasal obstruction, mass in the nose epistaxis, rhinorrhoea, hyposmia, deformity of nose and face. Occupation history, personal habits and socioeconomic status of patients was enquired. Clinical examination of cases was carried out as per the proforma enclosed.

Biopsy was taken from all cases for histopathological examination and to confirm the diagnosis. Patients were treated either by surgery radiotherapy or chemotherapy or medical line of management or a combination these. The patients were asked for regular follow up to know the efficacy of treatment modality given.

**Observation and results**

**Table No. 1 : Symptoms**

Sr.No.	Symptoms	No. of patients
1.	Nasal obstruction	109
2.	Rhinorrhoea	55
3.	Intermittent epistaxis or blood stained discharge	20
4.	Headache	18
5.	Hyposmia	35
6.	Swelling over face	13
7.	External nasal deformity	2
8.	Facial pain	4
9.	Eye complaints	12

Nasal obstruction was the commonest symptom in 97.32% cases.

Next to it were 49.1% rhinorrhoea, 31.25% hyposmia and 17.85% intermittent epistaxis.

16.87% Headache, 11.6% swelling over face, and 10.71% eye complaints.

Least common complaints were facial pain 3.87% and external nasal deformity 1.78%.

**Table No. 2 : Presentation of polypoidal mass in the nasal cavity**

Presentation of polypoidal mass	Non-neoplastic mass	Benign neoplastic mass	Malignant neoplastic mass	Total
Unilateral	23	18	13	54
Bilateral	57	1	0	58
<b>Total</b>	<b>80</b>	<b>19</b>	<b>13</b>	<b>112</b>

- 1) 47.74% Patients had unilateral while 52.25% patients had bilateral nasal masses.
- 2) All the benign as well as malignant polypoidal masses presented unilaterally except in one benign neoplastic mass.

**Table No. 3 : Number of polypoidal masses**

Number	Non-neoplastic mass	Benign neoplastic mass	Malignant neoplastic mass	Total
Single	22	18	12	52
Multiple	50	0	1	51
<b>Total</b>	<b>72</b>	<b>18</b>	<b>13</b>	<b>103</b>

- 1) Among non neoplastic polypoidal nasal masses 69.44% presented with multiple mass and 30.55% presented with a single mass.
- 2) All benign and malignant nasal polypoidal masses were found to be single except in one malignant case.

**Table No. 4 : Type of nasal discharge through nose**

Type of nasal discharge	Non-neoplastic mass	Benign neoplastic mass	Malignant neoplastic mass
Mucoid	27	02	-
Mucopurulent	15	01	-
Foul smelling	02	-	-
Blood stained/ Intermittent epistaxis	03	01	13

- 1) Mucoid discharge was found to be common in non neoplastic nasal polypoidal masses.

- 2) All the patients with malignant neoplastic polypoidal masses presented with blood stained discharge or intermittent epistaxis.

**Discussion:**

In the present study most of the patients of true nasal polypi ( 88.57% ) were seen in ages below 40 years. 11 cases of true nasal polypi were seen below the age of 10 years of which 1 was allergic polypi and 10 cases of inflammatory polypi. Out of 70 cases of true nasal polypi, 38 patients were males and 32 patients were females.

Allergic polypi arise most commonly from the ethmoidal labyrinth and are usually bilateral. They mainly present in the middle meatus and medial side of the middle turbinate. The inflammatory polypi usually arise from the antral mucosa, comes out through the ostium and present in the middle meatus or goes backwards towards the choana, hence called as "Antrochoanal polyp". They are usually are infective in origin and usually single, unilateral and have a well formed pedicle.<sup>4</sup>They are slightly firmer due to the fibrous element present following an infection as compared to the ethmoidal polypi. Very rarely these nasal polypi may arise from other paranasal sinuses i.e. frontal or sphenoidal sinus.<sup>5,6,7</sup>

In the present study, out of 70, 60 cases (85.1) were found to be arising from the middle meatus and 10 cases ( 14.28%) from the superior meatus.

**Symptoms :**

- Nasal obstruction, Rhinorrhoea, Hyposmia, Headache, Sneezing,
- Mass protruding through the nostril.
- In the present study nasal obstruction mainly unilaterally was seen in inflammatory polypi and bilaterally in allergic polypi.
- One patient was having external nasal deformity due to bilateral recurring

ethmoidal polyps, which first presented at the age of 20 years.

- One patient was having blood stained discharge due to an infected and ulcerated unilateral antrochoanal polyp.

A true nasal polyp varies in appearance. It may be smooth, translucent, glistening white and opaque, yellowish or pink and occasionally fleshy.

- In case of allergic ethmoidal polypi, they are multiple, grape like and have a long pedicle. The allergic polypi from ethmoidal regions have a tendency to descend towards the anterior nares.
- Antrochoanal polypi usually present in posterior choanae and may extend into the nasopharynx.
- Insensitive to touch and does not bleed on touch.

Allergic nasal polypi usually have a respiratory epithelium with ciliated columnar and goblet cells. If there has been repeated trauma squamous metaplasia may occurs. The submucosal tissue is grossly oedematous and contains few blood vessels which are mainly capillaries. The cellular infiltrate is mainly plasma cells, small lymphocytes, macrophages and the most striking feature is an eosinophil predominance. The eosinophilia may be very variable not only from patient to patient but also between polyps in the same patient (Chandra R.K. and'Abrol B.M., 1974).<sup>8</sup>

Inflammatory polypi show a respiratory epithelium over a normal basement membrane. The interstitium is grossly oedematous and the cellular infiltrate is

similar to allergic nasal polyp except there is paucity of eosinophils.

Nasal obstruction, Intermittent epistaxis or blood stained nasal discharge, Mass in the nose. In the present study unilateral obstruction and intermittent epistaxis were dominating symptoms in both cases.<sup>9</sup>

**Macroscopic appearance:** Raspberry like, pinkish, leafy, friable, polypoidal mass studded with grayish spots particularly on the inferior surface of the masses. It may be sessile or pedunculated and bleeds on touch.

**Microscopic appearance:** Surface epithelium may be normal or metaplastic. Ulceration of surface is seen in some cases. Thinning of surface epithelium and ulceration is responsible for the furious bleeding tendency. Deeper tissue shows vascular inflammatory

granulation tissue. The sporangia having a chitinous shell are seen in various states of maturity and enclosing thousands of spores. These sporangia are mostly distributed towards the surface.<sup>10,11</sup>

In the present study **macroscopic and microscopic features** were found similar as described above.

**Symptoms:**

- 1) Progressive blocking of the nose
- 2) Nasal discharge and sneezing in the initial stages
- 3) Headache

**Conclusion:**

In the present study nasal obstruction mainly unilaterally was seen in inflammatory polypi and bilaterally in allergic polypi.

**References:**

1. Blumstein G.I. (1966) : Nasal polyps. Archives of Otolaryngology, 83 : 266-269.
2. Ackerman L.Y., Surgical Pathology, 6<sup>th</sup> Ed. edited by Rosai J., page no. 205. The Mosby company St. Louis, Toronto.
3. Acuna R.T. (1973): Nasopharyngeal fibroma, Acta Otolaryngology, 75, 119.
4. Adams F. (1844-1847): The seven books of Paulus Aegineta, translated from the Greek in three volumes. The Sydenham Society, London, England.
5. Adenoid cystic carcinoma (1985) : Annals of Otolaryngology, Rhinology and Laryngology, Page No. 969, 89.
6. Agarwal K.K. (1982) : Angiofibroma in adult female. Indian journal of Otolaryngology, 34.
7. Alan D. Kornblut (1982): Granulomatous inflammation of the nose and paranasal sinuses. Otolaryngologic Clinics of North America, 15, 259.
8. Ash J.E., Beck M.R. and Wilkes J.D. (1964) : Tumours of the upper respiratory tract and ear in Adas of Tumour Pathology, Section IV, Armed Forces Institute of Pathology, Washington D.C.
9. Bader G. and Gruber (1970):Histochemical studies of Rhinosporidium seeberi, Virchows Archives Of Pathology and Anatomy 350, 76-86.
10. Ballenger J.J., (1985): Tumours and cysts of the face, pharynx and nasopharynx Ed. 13<sup>th</sup>, Lea and Febiger, Philadelphia, Page No. 328.
11. Barney P.L.: Pathology of the nose and paranasal sinuses. Monographs in the pathology of the Head and Neck, Atlas Series, Chicago, Am. Soc. Clin. Pathol. Press, 1982.