

Clinicopathological Study of Nasal Polypoidal Masses.

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ABSTRACT

Background: Lesions involving the nasal cavity and the paranasal sinuses and could be due to many of the specialized issues and the aberrations that exist in the region. Nasal symptoms are one of the most common reasons for which the patients seek medical advice. Upper airways are involved in a variety of non-neoplastic and neoplastic diseases, which are very difficult to clinically distinguish. There it is essential that all masses are removed from nose and paranasal sinuses and should be fully examined histopathologically. **Methods:** Clinicopathological study of 52 cases of nasal polypoidal masses was performed. Clinical examination, routine investigations, Chest X ray PA was taken for all patients. Rhinoscopy was performed when necessary. **Results:** Male predominance was seen among all the sinusoidal masses with the common age group being 20 – 40. Non neoplastic masses were more common than neoplastic, with unilateral being more prevalent. Among the bilateral masses, only non-neoplastic mass was observed. Malignant were rare and if present were observed only in unilateral cases. All the patients has nasal obstruction with other common symptoms being rhinorrhoea, epistaxis and headache. Histopathologically, allergic polyp and inflammatory type were more common than rhinosporidiosis and haemangioma. **Conclusion:** Polyp is the most common lesion of nasal cavity, nasopharynx and paranasal sinuses in different age groups with histopathological examination being the easiest method for identification and distinguishing the aetiology and type of the sinonasal polypoidal masses.

Keywords: Sinusoidal masses, Nasal polyps, Non neoplastic, Neoplastic

INTRODUCTION

Nose is the most prominent part of face with great aesthetic significance and functional importance. Polypoidal nasal mass or prolapsed pedunculated mucosa of the nose and paranasal sinuses is a mass of tissue that bulges or projects downwards from the normal nasal surface. It may be due to the most frequently occurring simple polyps or lesions due to other pathological entities ranging from infective granulomatous disease to polypoidal neoplasms including the malignant ones.

A variety of non-neoplastic and neoplastic conditions involving the nasal cavity, paranasal sinuses (PNS), and nasopharynx are commonly encountered in clinical practice.^[1] The clinical symptoms of all sinonasal masses are similar, i.e., nasal obstruction, rhinorrhea, blood stained nasal discharge, epistaxis, oral symptoms, facial swelling, orbital symptoms, ear symptoms, etc.^[2] It is quite impossible to clinically distinguish between such lesions and therefore it is essential that it be removed from nose and paranasal sinuses and examined histopathologically.

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The delay in diagnosis and treatment of non-neoplastic polypoidal lesions increases morbidity,

especially angiofibroma and malignancies of nose and paranasal sinuses.

The nasal masses can be divided into non neoplastic and neoplastic masses which are further divided into benign and malignant. Due to the similarity of clinical symptoms of all the sinusoidal masses, diagnosis can be made by nasal endoscopy, radiology, and histopathology.

The purpose of this study was to identify the incidence in benign and malignant polypoidal masses, and observe the signs and symptoms and correlate them with the clinical findings, histopathological and radiological examination.

MATERIALS AND METHODS

Clinicopathological study of 52 cases of nasal polypoidal masses was performed during a period of 3 years (May-2013 to April – 2015) was performed at Belgum Institute of Medical Sciences. The clinical features which were taken into consideration were unilateral or bilateral nasal obstruction, intermittent epistaxis, mass in nose, unilateral or bilateral rhinorrhoea, hyposmia, deformity of the nose. Clinical examination of the patient including anterior and posterior rhinoscopy with nasal endoscopy was performed where ever necessary. Other routine investigations performed were complete blood picture, urine examination, X-ray of paranasal sinuses, X-ray of skull, lateral view for any soft tissue shadow, Nasal endoscopy if required, CT scan for deeper invasion and suspected cases of malignancy.

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RESULTS

A male predominance was seen among the 52 patients in all the types of polypoidal masses, with 35 being male and 17 being females overall [Table 1]. The patients were in the age group of 6 – 72. Of them, majority of the non-neoplastic mass was seen in 11-40 age group, while the malignant neoplastic mass was seen among the age group 61 – 70 [Table 2]. All the 52 patients had nasal blocking while rhinorrhoea was the most common symptom

followed by intermittent epistaxis [Figure 1]. The masses were predominantly bilateral in case of non-neoplastic masses but were unilateral in case of benign and malignant neoplastic masses [Figure 2]. There were no bilateral or multilateral masses seen in benign or malignant mass. Most of the masses originated from middle meatus, followed by lateral wall of nasal cavity [Figure 3]. Histopathologically, predominant feature was allergic polyps, followed by inflammatory polyps [Figure 4].

Table:1 Correlation between sex incidence and the nasal polypoidal lesions

Type of polypoidal masses	Number	Males (No.)	Females (No.)
Non neoplastic mass	27	17	10
Benign neoplastic mass	18	13	5
Malignant neoplastic mass	7	5	2
Total	52	35	17

Table:2: Catagorization by Age group

Age in years	Non - Neoplastic mass	Benign - Neoplastic mass	Malignant - Neoplastic mass
Below 10 years	2	-	-
11 – 20 year	6	7	-
21 – 30 Years	9	5	1
31 – 40 Years	5	2	1
41 – 50 Years	2	2	-
51 – 60 Years	1	1	2
61 – 70 Years	1	-	3
71 – 80 Years	8	-	-

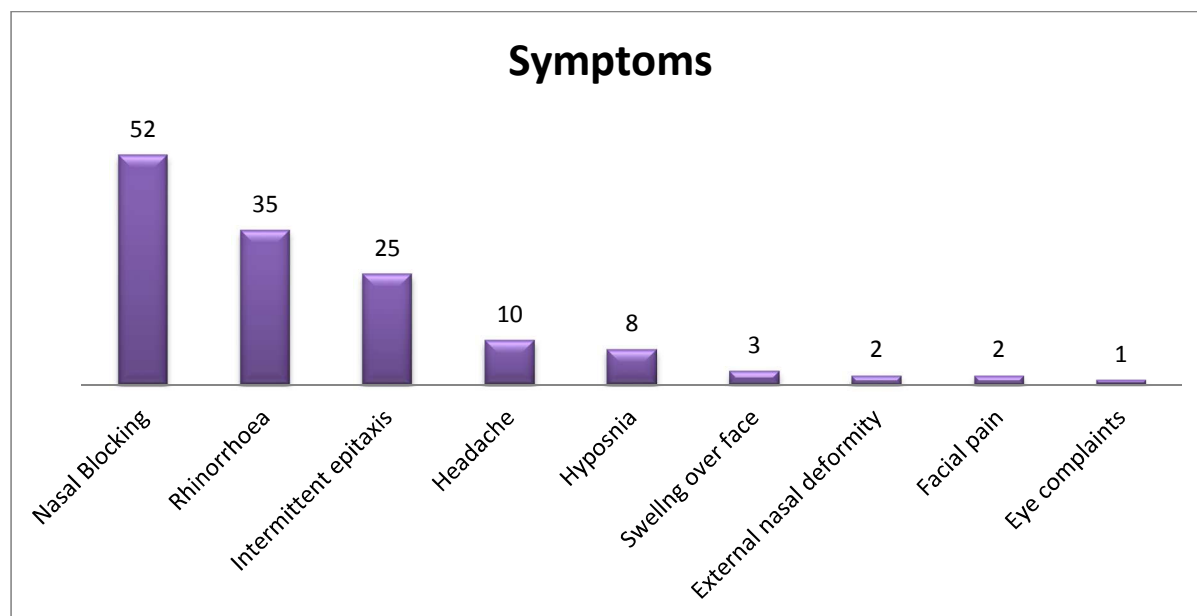


Figure 1: Common symptoms in sinusoidal masses

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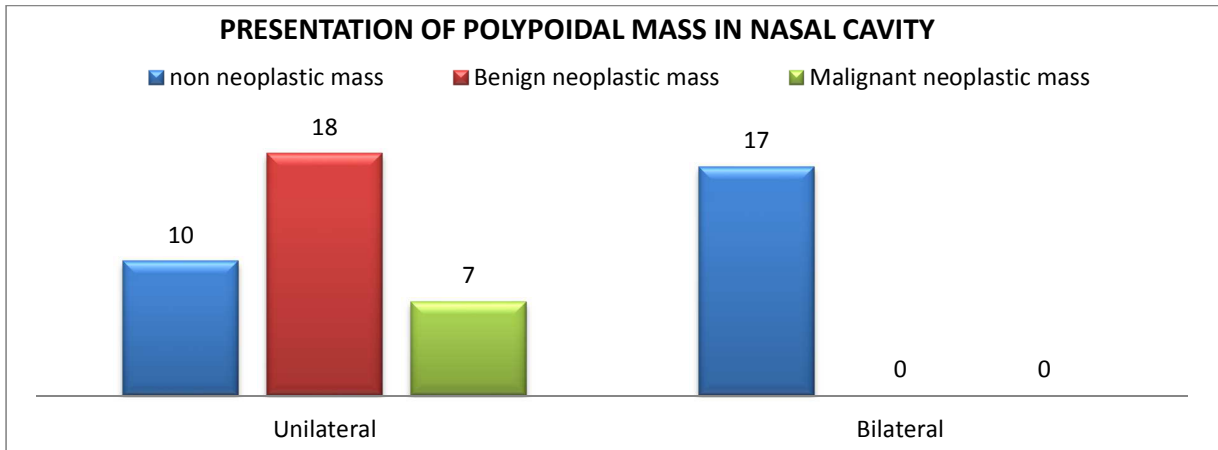


Figure 2: Presentation of polypoidal mass in nasal cavity

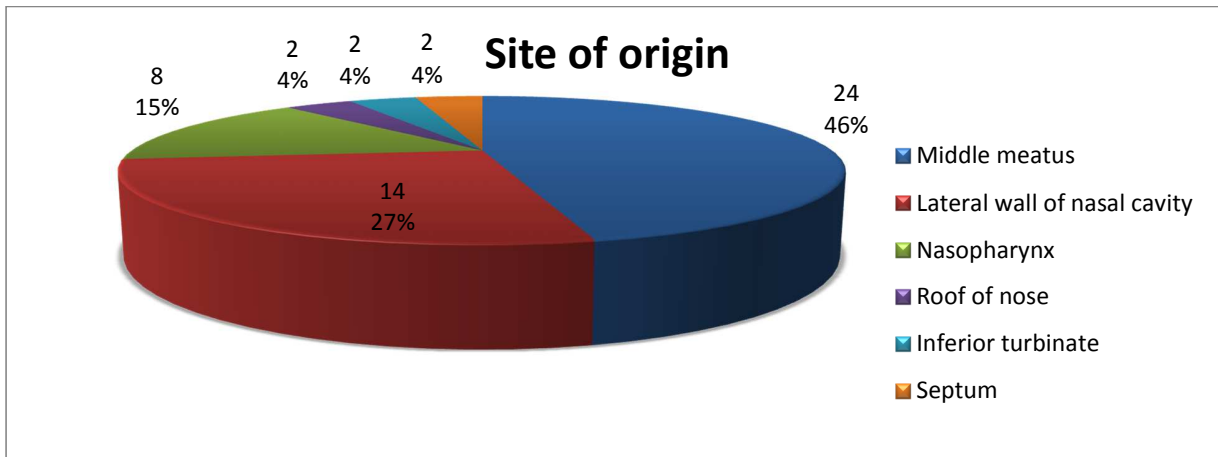


Figure 3 : Site of origin of the mass

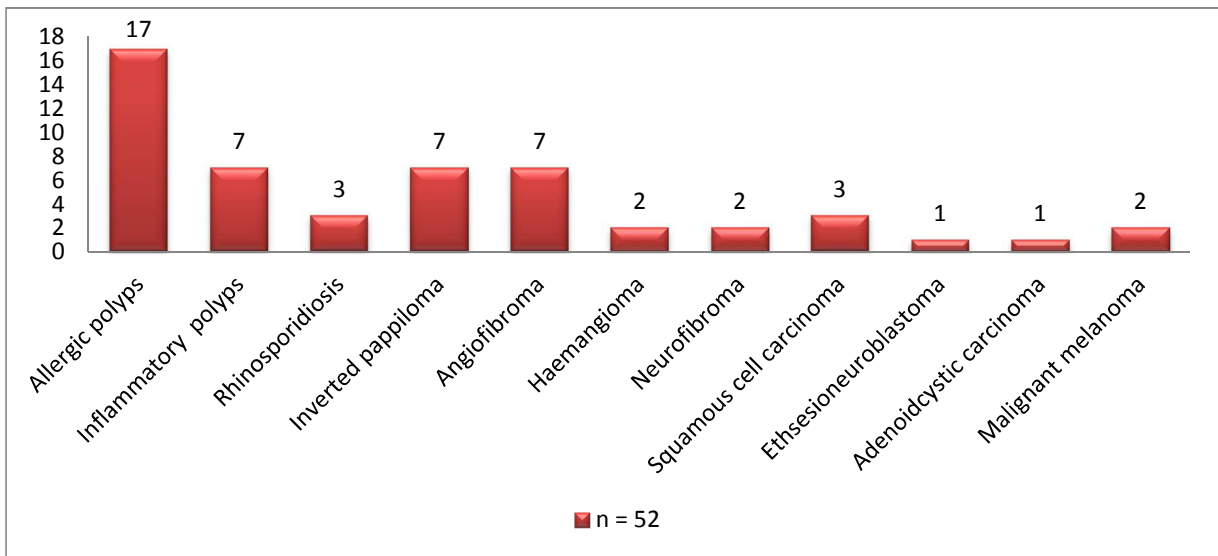


Figure 4: Histopathological types of nasal polypoidal masses

DISCUSSION

Masses in nasal cavity, paranasal sinuses and nasopharynx form a heterogeneous group of lesions with a broad spectrum of histopathological features. A variety of these non-neoplastic and neoplastic lesions are quite impossible to differentiate clinically and they are mostly clinically diagnosed as nasal polyp.^[3,4] These are mostly neglected by the clinicians. The lack of differentiation between non-neoplastic and neoplastic, benign or malignant makes it neglected by the clinicians, as a result causing a delay in diagnosis and treatment.^[5]

In the present study, there was a marginal predilection towards males rather than females. This was observed by Zafar et al^[1] and Garg et al^[6] while in a study in Nigeria, females had a predominance.

The most vulnerable period for the development of the nasal masses were between 20 – 50 years. In a study by Bakari et al^[7], peak incidence at 33 years was observed, while Zafar et al^[1] the mean age was 22.5 years. Malignancy was also seen between 20-40 years age.

In the present study, the most common symptom observed was nasal blocking seen in all 52 cases (100%) followed by Rhinorrhoea (67.3%). Epistaxis in 48.7% and headache in 19.2% of the cases were also seen. Similar findings such as nasal obstruction, rhinorrhoea, epistaxis, headache, hyposmia were observed by Lathi et al^[6] with 97.3%, 49.1%, 17.9%, 16.9% 31.3%, respectively; by Bist et al^[8] with 87.27%, 69.06%, 50%, 60.9%, 68% respectively. These findings were corroborated by other researchers as well.^[4,7,9]

Nasal polyps result from chronic inflammation of the nasal and sinus mucous membranes and are the most common tumours of the nasal cavity. Their exact pathogenesis is not known, however a strong association with allergy, infection, asthma and aspirin sensitivity has been implicated.^[10,11] In our study also non neoplastic polypoidal masses (46.2%) were more common than neoplastic, with bilateral being more predominant over unilateral. Among the unilateral masses, benign were more common than non-neoplastic, Malignant polypoidal masses were comparatively rare. Of them, allergic polyp was the most predominant one histopathologically, followed by inflammatory polyp. We observed 7 cases each of angiofibroma and inverted papilloma and Haemangioma was seen in 2 cases.

Rhinosporeidiosis is a rare disease in the western world but an endemic disease in India, Sri Lanka and a few African nations.^[12] We observed 3 such cases, while 2 cases of rhinosporeidiosis were observed by Lathi et al,^[6] and Pradhananga et al.^[9] had encountered only one case during their two year

study period. Though comparatively rare, Inverted papilloma is the most commonly encountered lesion of all sinonasal papillomas.^[13]

Histopathological examination was very useful in the diagnosis of polypoidal lesions, as both aetiology and cellular details could be described. Radiology was also useful in the understanding of the type of pathology, extension of lesion and associated sinus pathology.

Most of non-neoplastic and benign neoplastic nasal masses require surgical excision, while malignant neoplastic nasal masses require wide surgical excision, radiotherapy or chemotherapy either alone or in combination. Regular follow-up is necessary for early detection of recurrence or metastases. The outcome for malignant lesions is relatively poor and associated with late diagnosis, difficult surgical anatomy and a lack of effective adjuvant modalities of treatment.^[14]

CONCLUSION

Sinonasal masses have various differential diagnoses. The presenting feature of the neoplastic and the non-neoplastic sinonasal masses maybe indistinguishable from each other leading to a delay in proper diagnosis and treatment. Correlation of clinical, radiologic, and pathologic modalities is of utmost important for accurate diagnosis, since they are complementary to each other. Moreover, malignant masses should be distinguished from the other types. Polyps are the most common benign lesion, while squamous cell carcinoma is the most common malignant tumour of the sinonasal tract. Nasal obstruction is the most common symptom. Medical management is often not adequate and has a limited role. Surgery is the treatment of choice for benign lesions, while a combination of surgery and radiotherapy is helpful in malignant conditions.

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