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Histopathological Study of Sinonasal Lesions in Tertiary Care Hospital

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Abstract
Background: *Lesions of the sinonasal region are commonly encountered in clinical practice and important from clinical and pathological perspectives as they have varieties of histological patterns. 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. It is quite impossible to distinguish between such lesions and it is essential that all masses removed from nose and paranasal sinuses should be fully examined histopathologically.*

Introduction

The nasal cavity, nasopharynx and paranasal sinuses form functional unit of nose and is principally involved in filtering, humidifying and adjusting temperature of inspired air[1]. Non neoplastic and neoplastc lesions of nasal cavity, paranasal sinuses and nasopharynx are commonly encountered in clinical practice[3]. Sino nasal mass is a common finding found in almost all age groups of people[2]. Most patients present with complaints of nasal obstruction. Other symptoms include nasal discharge, epistaxs and disturbances of smell[3]. Sinonasal area is exposed to various infective agents, chemicals, antigens, mechanical and many other influences[3]. These masses may be inflammatory, including allergic, traumatic, granulomatous or maybe neoplastic.

The presenting features and symptomatology and advanced imaging techniques help to reach a presumptive diagnosis but histopathological examination remains the mainstay of definitive diagnosis[7]. The purpose of this study is to classify various types of non neoplastic and neoplastic lesons histopathologically presenting as sinonasal mass and provide a clinico pathological profile of sinonasal masses in our hospital which is a tertiary care centre.

Objectives

This is a 5 year study with the aim to study the spectrum of histopathological lesions of nasal cavity, nasopharynx, and paranasal sinuses.

Materials and Methods

The study was conducted in the department of Pathology at Mysore Medical College and Research Institute over a period of 5 years both retrospectively and prospectively. Clinical data was retrieved from histopathology requisition form/hospital records of patients who presented with a nasal mass. All the specimens (biopsies/ surgical specimens) were fixed in 10% formalin, embedded in paraffin, sectioned at 5µ and stained with hematoxylin and eosin. All the cases with

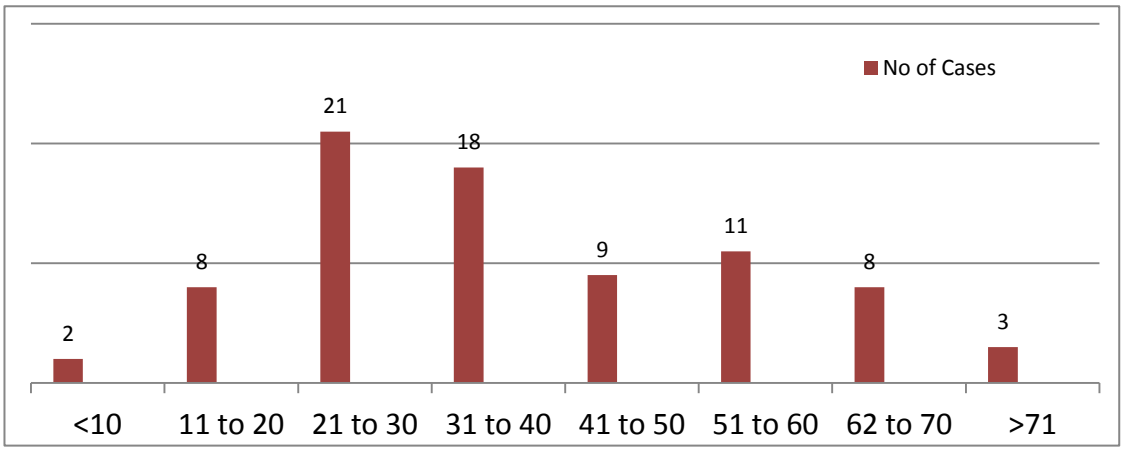
complaints of sinonasal mass were included in the study. Previously treated cases of sinonasal disease with recurrence were excluded from the study. A total of 80 cases of sinonasal masses fulfilling these criteria were finally included in this study.

Observation

Majority of lesions of sinonasal cavity, nasopharynx and paranasal sinuses occur in 3rd decade 21 cases (26%) followed by 4th decade 18 cases (22%). Non neoplastic lesions 64 cases (80%), neoplastic benign lesions 8 cases (10%), and malignant 8 cases (10%) was observed. Males are affected in 48 cases (60%), with male:female ratio 3:2. Most of benign neoplasms occur in 3rd and 4th decade.

Most of malignant neoplasms in 5th and 6th decade. Majority of lesions occur in nasal cavity 46 cases (57%), followed by paranasal sinuses 19 cases (24%) and nasopharynx 15 cases(19%).

Nasal polyps 52 cases (65%) are the most common benign lesion of the nasal cavity and Squamous cell carcinoma nasopharynx 8 cases(10%) is the most common malignant lesion.



Age group

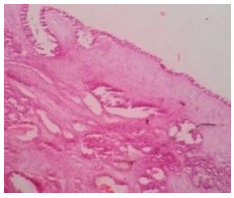
Discussion

Patients with sinonasal lesions presented in all decades of life. Most cases presented unilateral sinonasal masses. The lesions are benign in more than 2/3rd cases. Male preponderance was observed in all lesions. Nasal cavity was the most common site of involvement in all lesions followed by maxillary sinus and nasopharynx.

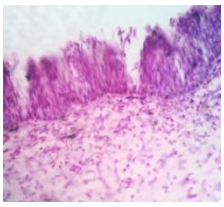
Nasal polyps are the most common benign lesion of the nasal cavity as was seen in our study. They result from chronic inflammation, allergen, pollutants, infectious agents, with no particular age and sex predilection. In our study males were slightly more affected. According to a study by Shaila N Shah[1], out of 100 cases, 70 cases (70%) were polyps. According to study by Aparna M Kulkarni[7], out of 117 cases, 70 cases (69.3%) were polyps. In the present study out of 80 cases 52 cases (68%) were polyps.

Papillomas in nose & nasal sinuses are stated to be commonly occuring benign epithelial neoplasm. Inverted papillomas are common. Capillary haemangiomas are benign epithelial tumors. Aggressive fibromatosis of paranasal sinus are rare. Rhinoscleroma are the inflammatory lesions caused by Gram negative rods klebsiella rhinoscleroma. In a study by Aparna M Kulkarni[7], rhinoscleroma 16 cases (15%) was the second most common non-neoplastic lesions. In our study 1 case of rhinoscleroma was noted . In a study by Shaila N Shah[1], out of 100 cases 8 cases were squamous cell carcinoma nasopharynx and one case of nasal mucoepidermoid carcinoma was noted. In our study, out of 80 cases, 5 cases of nasopharyngeal carcinoma, 2 cases of nasal mucoepidermoid carcinoma and 1 case of olfactory neuroblastoma was noted. Nasopharyngeal carcinoma particularly squamous cell

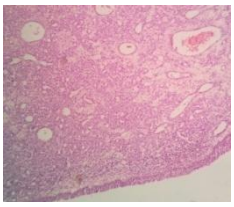
carcinoma are common malignant tumors. Primary sinonasal tract mucoepidermoid carcinomas are uncommon tumors. Olfactory neuroblastoma are rare malignant neuroectodermal tumor.



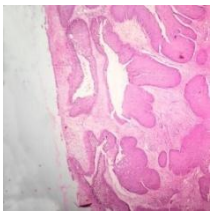
Inflammatory Nasal Polyp



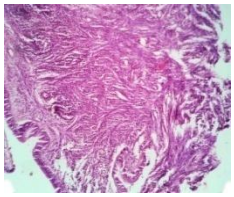
Antrochoanal Polyp



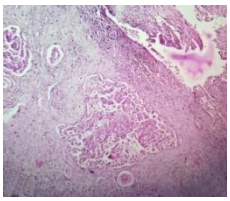
Capillary Hemangioma



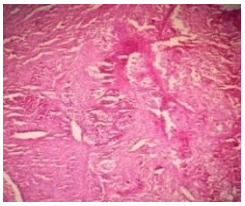
Inverted Sinonasal Papilloma



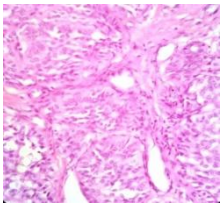
Nasopharynx SCC



Nasopharynx SCC



Mucoepidermoid Carcinoma



Olfactory Neuroblastoma

Conclusion

Histopathological examination is simple, reliable and cost effective diagnostic procedure for the detection of various lesions of nasal cavity, paranasal sinus and nasopharynx. Polyp is the most common benign lesion. Squamous cell carcinoma is the most common malignant lesion

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