Clinicopcthological Study of Lesions of Nasal Cavity, Paranasal Sinuses and Nasopharynx

Vijaya Muddamwar[1*], R. D. Hanmante[2], P. S. Mulay[3], S. A. Deshpande[4]

{[1,2,3]Assistant Professor, [4]Professor and HOD}

Department of Pathology, Dr Shankarrao Chavan Government Medical College, Nanded, Maharashtra, INDIA.

[*]Corresponding Address:

drvijayakomwad@gmail.com

Research Article

Abstract: The upper respiratory tract is made up of variety of elements like epithelial tissue, glands, lymphoid tissue, cartilage and bone. various infections, tumor like lesions and true neoplasm occur in the upper respiratory tract. The lesions are important for ENT surgeons as well as pathologist. Exact diagnosis of the lesions can affect the treatment as well as prognosis. 70 cases with lesions of nasal cavity, paranasal sinuses and nasopharynx were studied. Study group ranges from 08 to 70 years age group. Various lesions like inflammatory lesion, neoplastic lesion and tumor like lesion were encountered during the study. Inflammatory lesions were classified as per gudelines by Bhargava and Shah and neoplastic lesions were classified as per WHO guidelines.

Keywords: nasal cavity, paranasal sinuses, nasopharynx, inflammatory lesion, tumor.

Introduction

The upper respiratory tract is made up of variety of elements like epithelial tissue, glands, lymphoid tissue, cartilage and bone. [1] It gets exposed to varity of infections and other influences in the enviornment. Due to the effects of these factors various infections, tumor like lesions and true neoplasm occur in the upper respiratory tract. Main lesions of this region are granulomatous and neoplastic which are important for ENT surgeons as well as pathologist. [1, 2] Exact diagnosis of the lesions can affect the treatment as well as prognosis.

Aims and objectives

1. To study the clinical and histopathological features of various lesions of nasal cavity, paranasal sinuses and nasopharynx.
2. To study the histopathological pattern of lesions and classify them.
3. To study the rare and unusual cases.

Materials and Methods

The present study comprises of 70 cases of lesions of nasal cavity, paranasal sinuses and nasopharynx admitted in the ENT ward of C.S.M.S.R. Hospital Solapur over a period of two years from January 2005 to December 2006. Cases were subjected for detailed history, thorough clinical examination, relevant laboratory and radiological investigations. Specimens were examined and studied in the department of pathology, Dr V.M.G.M.C. Solapur.

Observations and Results

During the present study, nasal cavity lesion accounts for 43 cases (62%), Paranasal sinuses 26 cases (37%) and Nasopharynx 01 case (1%). Frequency of lesions of nasal cavity, paranasal sinuses and nasopharynx was more common in the 3 rd and followed by 4 th decade of life. Male accounts for the majority of cases among the study population with sex ratio was 1.5:1. Inflammatory lesion constitute the major portion of study accounting for 47 cases (67%), followed by Malignant lesion 09 cases (12%) then Benign lesion 08 cases (11%) and Tumor like lesion 03 cases (4.2%). Among the study population, Nasal obstruction was the predominant complaint followed by Rhinorrhoea, Recurrent rhinitis, Epistaxis and swelling over face. The nasal lesion (n=43) includes Inflammatory polyp (22 cases), Haemangioma (5 cases), Rhinoscleroma (4 cases), Allergic polyp (4 cases), one case each of Angiofibroma , Fibrous histiocytoma , Meningioma, Malignant melanoma, Olfactory neuroblastoma, Pseudoepitheliomatous hyperplasia and other condition includes 2 cases. While Inflammatory polyp (18 cases), Reparative giant cell granuloma (2 cases) and Malignant tumor (7 cases) constitutes the lesions of paranasal sinuses and nasopharynx (n=27).

Discussion

Pathologies involving the nose, paranasal sinuses and nasopharynx are very common.

The lesions presenting as mass are mainly nasal polyps, neoplasm and tumor like lesions. Amongst these, nasal polyps are most frequent. In a large series over a period of 20 years in Royal National ENT Hospital, London reported 04 % nasal polyps. In the present study, nasal polyps accounts for 02 % of cases. Barucha T. *et al*. 1978 stated that tumors of nasal cavity, paranasal sinuses and nasopharynx are uncommon and account for about 0.8% of all tumors of head and neck region and 03% of all malignant tumors of the upper respiratory tract. In the

present study, 100% cases presented with nasal obstruction and 80% cases presented with rhinorrhoea. This findings fairly correlates with study of Royal National ENT Hospital, London. Tondon *et al*. (1971) [3] , Banerjee *et al*. (1993) and Panduranga M. *et al*. (2002) reported allergic polyps as the commonest subgroup among polyps while in present study inflammatory polyp was the commonest. Two large series of epithelial and non epithelial tumors involving the nose, paranasal sinuses and nasopharynx, have appeared in the literature. Geschicter *et al*. (1935) (n=221) reported 71% (n=158) epithelial and 28% (n=63) tumor and Ringertz *et al*. (1938) (n=391)reports 84% (n=332) epithelial and 15% (n=59) tumor. The present study reports 35% epithelial and 65% tumor. The major bulk of nonepithelial tumors in the present study was composed of vascular tumors, of which haemangioma was most common. Fu and Perzin *et al*.(1974) [4] reported 85 cases of haemangioma in 256 cases of nonepithelial tumors. Carcinoma of the nose and paranasal sinuses constitutes less than 1% of all malignant tumors. Death from carcinoma of the nose and paranasal sinuses accounts for 1.5% of all malignant tumors. (Friedmann I. *et al*.) [5] Among the malignant tumors, the frequency of squamous cell carcinoma was more common, reported by Frazell *et al*.(1963) [6] , Ghosh *et al*.(1966) and Cheng and Wang *et al*.(1977) [7] . In the present study, squamous cell carcinoma encountered 50%, undifferentiated carcinoma 33% and Transitional cell carcinoma 16%, fairly correlated with the study of Cheng and Wang *et al*.(1977). The frequency of the malignant tumors in paranasal sinuses was more than nasal location was reported by Frazell and Lewis (1963), Acheson *et al*. (1970) [8] and Cheng and Wang *et al*.(1977). The findings of the present study correlated with previous studies. As most of the lesions of nasal cavity, paranasal sinuses and nasopharynx can present as polyp like lesions, their histopathological examination can help surgeons in diagnosis of diseases and choosing the right modality of treament. Rare tumors can occur in these areas. It makes pathologist and ENT surgeon to be aware of rare pathologies in this location.

References

1. Bhargav and T.M. Shah – Textbook of ENT diseases. 3 rd edi. 1995 p 176-80.
2. Ackerman Textbook of surgical pathology, 2004, 9 th edi by Juan Rosai, published by Japee Brothers, India.
3. Tondon *et al*. Histopathological study of polypoidal lesion in the nasal cavity. Indian Journal of Otolaryngiology,1971;23:3.
4. Fu and Perzin *et al*. Nonepithelial tumors of the nasal cavity, paranasal sinuses. A clinicopathologic study of cancer;1974,34:453-63.
5. Friedmann I. *et al*. The nose and sinuses. Systemic pathology by 38 authors, edited by symmers W.S.C. 2 nd edi. Pg 191. Churchil livingston edinnburg London, New York.
6. Frazell E.L. and Lewis J.J. Cancer of nasal cavity and accessory sinuses. Report of 416 patient cancer, 1963:16:1263.
7. Cheng V.S.T. and Wang C.C. Cancer of the paranasal sinuses. A study of 66 cases. Cancer, 1977;40:3038.
8. Acheson E.D, Cowdell R.H. and Jolles B. Nasal cancer in Northen shire boot and shoe industry. British Medical Journal, 1970; 1: 385.