



Histopathological pattern of diseases in Otorhinolaryngology Department of a recently established tertiary care hospital

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Abstract

The histopathological diagnosis in various Otorhinolaryngological diseases range from benign- malignant-inflammatory. The benign and the inflammatory conditions are more common than malignant.

Aim

1) To describe pattern of histopathology in ENT & head and neck diseases according to age, gender & anatomical location.

2) To study the prevalence of inflammatory conditions in ENT and head & neck.

3) To study prevalence of benign & malignant lesions in both the gender & various age groups.

Materials and Methods: A retrospective research study conducted in Otorhinolaryngology department of a tertiary care centre over a period of 3 years from Jan 2014 to Jan 2017. It includes total of 122 patients, attending ENT OPD in whom any histopathological examination was done and data was analyzed on basis of histopathological diagnosis, age & sex.

Result: Out of total 122 patients over a period of 3 years. Maximum no. of patients were in the age group of 21-30 years (29.5%) with male: female ratio of 1.6:1. Most common lesion observed is sinonasal mass 28.6%, followed by neck 16.2% & thyroid 8%. Most common non-neoplastic lesion in this region is rhinosporidiosis in 16.3% cases which was present in all age group but peak age of presentation was 2nd decade with male preponderance followed by inflammatory polyp seen in 10.6% cases present in 2nd and 5th decade, equally prevalent in males and females followed by tubercular lymphadenitis which was present in 4% cases, predominantly in females of 3rd & 4th decade. Most common benign neoplastic lesion is epidermal cyst (13.1%) followed by mucocoele (7.3%), Colloid goiter (4%) and follicular adenoma (3.2%). Single case of inverted papilloma was reported in a female in 2nd decade. Malignancy was reported in 10.6% cases, squamous cell carcinoma was most common histopathological diagnosis 76.9% of all malignancy, peak age of presentation was 5th decade with male predominance. Single case of papillary carcinoma thyroid was reported in a 40 yr old male this is contradictory to benign lesions of thyroid which were reported in females only. Single case of poorly differentiated carcinoma of nose reported with nasal obstruction & discharge in a 63 yr old male. Non- Hodgkin's lymphoma was reported in a 65 yr old male.

Conclusion: Histopathological diagnosis in ENT & Head and neck Department range from benign- malignant-inflammatory diseases. Our institution is a recently established centre, with steadily increasing outpatient statistics. The study was conducted in the initial years of the institute and this may be a limiting factor in establishing the true histopathological pattern in Otorhinolaryngology diseases. In our opinion this study needs further evaluation.

Keywords: Histopathological examination, neoplastic condition & inflammatory disease.

Introduction

A variety of non neoplastic, neoplastic and inflammatory conditions involve ear, nose, throat & head and neck region and some of these are very common lesions encountered in clinical practice. The presenting features, symptomatology and advanced imaging technique help to reach a presumptive diagnosis but histopathological examination remains the mainstay of definitive diagnosis. Nasal masses are common finding in an Otorhinolaryngology department, they are difficult to diagnose clinically and histopathology plays a vital role in deciding their management. FNAC is a rapid, cheap diagnostic tool with overall accuracy rate >90%, excisional biopsy remains the gold standard for diagnosis of head & neck neoplastic lesions.⁽¹⁾

Materials and Methods

A retrospective study was conducted in Department of Otorhinolaryngology from January 2014 to January 2017 and included 122 patients who were subjected to histopathological examination. Zeihl-Nelsen staining for acid fast bacilli was done in suspected tubercular lesions. Biopsy specimens were fixed in 10% neutral

buffered formalin processed by paraffin embedding and stained with haematoxylin and eosin stain.

Results

The present study includes 122 cases of ENT & head and neck lesions attending ENT Department as an outdoor patient as well as an indoor patient. Age group of patients ranged from 6 years to 75 years. Out of total 122 patients over a period of 3 years maximum no. of patients were in the age group of 21-30 years (29.5%) followed by 11-20 years (22.9%) and minimum no. of patients were seen in age group of above 70 years. Out of 122 patients 76 (62.2%) were males and 46 (37.7%) were females. Site wise distribution of ENT & head and neck histopathology shows nose(28.4%) as the predominant site of lesion followed by neck (16.2%), lip (8.9%), thyroid (8.1%) and face (5.2%), rest other site constitute around 32%.

Out of 122 cases most common lesion is benign neoplastic lesion 58 cases (47.5%), chronic inflammatory lesion was present in 51 cases(41.8%), followed by malignant neoplastic lesion in 13 cases(10.6%).

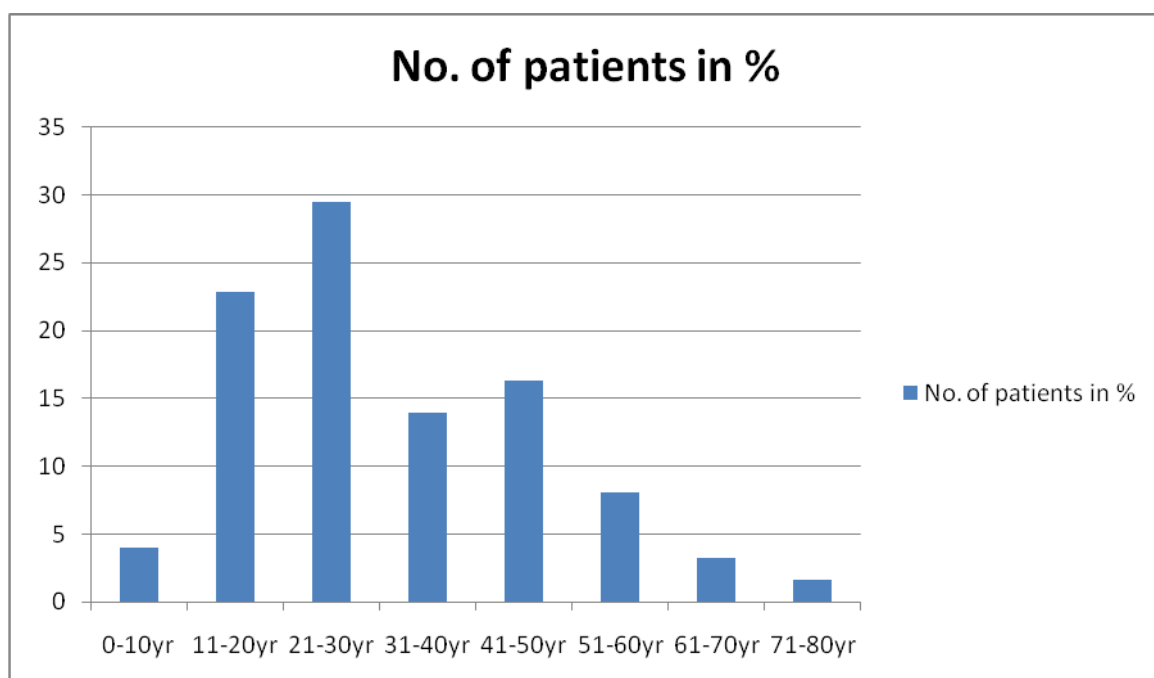


Fig.1 Age wise distribution of patient

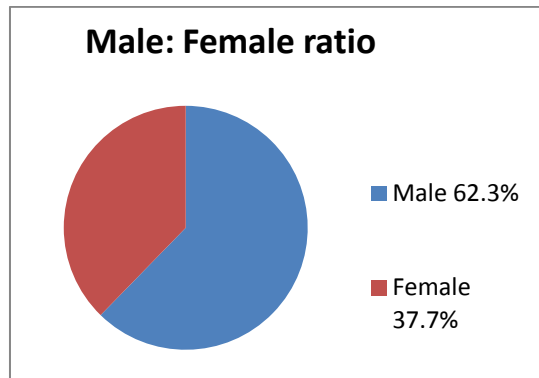


Fig.2 Gender wise distribution of patient

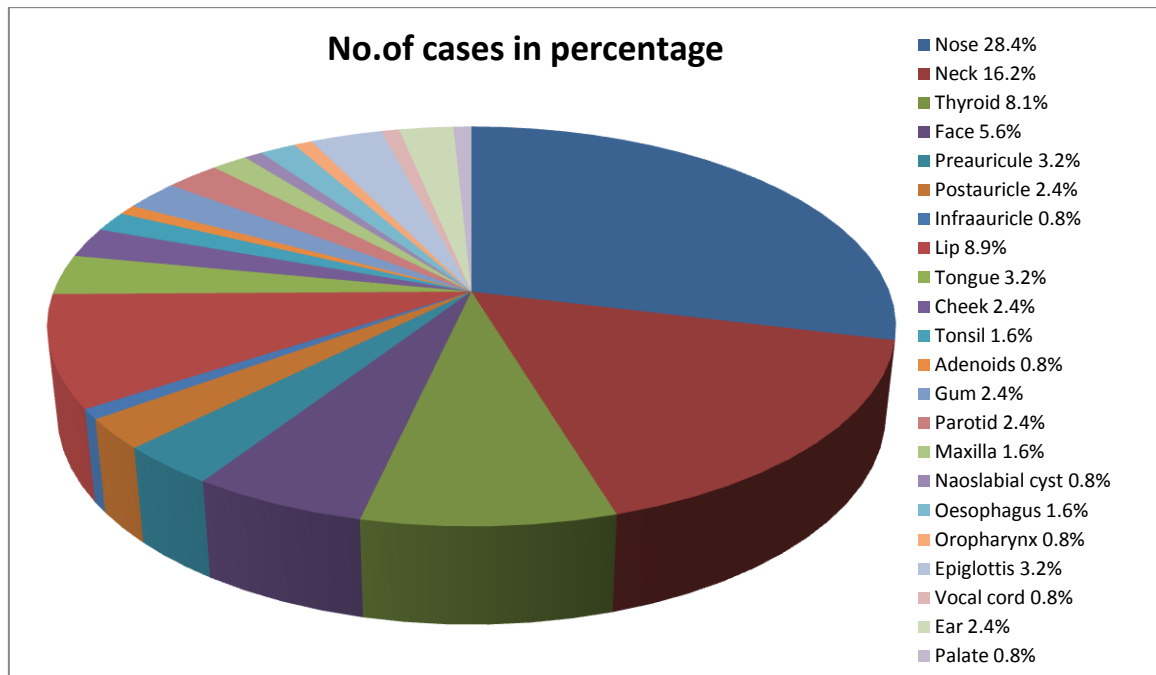


Fig 3: Distribution of ENT & Head and Neck Lesions [Cases=122]

Table 1: Distribution of non neoplastic lesions of ENT & Head and neck

S.NO	Lesions	Number of cases	Males	Females	Age of presentation
1.	Rhinosporidiosis	20	16	4	1,2,3 & 4 th
2.	Inflammatory polyp	13	8	5	2, 3, 4& 5 th
3.	Tubercular lymphadenitis	5	2	3	3& 4 th
4.	Granulamatous lesion	1	1	0	3 rd
5.	Molluscum contagiosum	1	1	0	3 rd
6.	Thyroglossal duct fistula	2	2	0	2 nd & 4 th
7.	Fungal mass	1	0	1	3 rd
8.	Verrucous vulgaris	1	0	1	2 nd
9.	Non specific chronic inflammation	7	6	1	2 nd & 4 th

Out of 122 cases most common non neoplastic lesion in this region is rhinosporidiosis 20 cases (16.3%) which was present in all age group but peak age of presentation was 2nd decade with male preponderance followed by inflammatory polyp

seen in 13 cases (10.6%) present in 2nd and 5th decade, equally prevalent in males and females followed tubercular lymphadenitis present in 5 cases (4%) predominantly in females in 3rd & 4th decade.

Table 2: Distribution of benign neoplastic lesions of ENT & Head and neck

S.No.	Lesions	No . of cases	Male	Female	Age (decade)
1.	Epidermal cyst	16	15	1	2 nd , 3 rd , 4 th & 5 th
2.	Mucocoele	9	4	5	1 st 2 nd & 3 rd
3.	Follicular adenoma thyroid	4	0	4	3 rd & 5 th
4.	Colloid goitre	5	0	5	3 rd & 4 th
5.	Parotid adenoma	3	0	3	3 rd & 5 th
6.	Haemangioma	2	1	1	2 nd & 3 rd
7.	Lymphangioma	1	0	1	6 th
8.	Lipoma	3	1	2	3 rd & 4 th
9.	Epulis	2	2	0	5 th
10.	Inverted papilloma	1	0	1	2 nd
11.	Leukoplakia	1	1	0	5 th
12.	Epiglottic cyst	2	2	0	4 th & 6 th
13.	Pilomatrixoma	1	1	0	5 th
14.	Dentigerous cyst	2	2	0	2 nd & 3 rd
15.	Spindle cell tumour	1	0	1	3 rd
16.	Nasopalatal cyst	1	1	0	3 rd
17.	Unspecific	2	1	1	3 rd & 6 th

Most common benign neoplastic lesion in this region is epidermal cyst 16 cases (13.1%) present in all age group but peak age of presentation was 2nd decade with male predominance followed by mucocoele 9 cases (7.3%). Colloid goiter was present in 5 cases (4%) and follicular adenoma in 4 (3.2%) cases both are predominantly seen in

females. Pleomorphic adenoma is also a common finding constitutes 3 cases (2.4%) all were females. Other soft tissue tumors lipoma, haemangioma, lymphangioma, were also reported. Single case of inverted papilloma was reported in a female in 2nd decade.

Table: 3 Distribution of malignant neoplastic lesions of ENT & head and neck

S.NO	LESIONS	No. of cases	Male	Female	Age in decade
1.	Squamous cell carcinoma	10	7	3	4 th to 7 th , mc 5 th
2.	Papillary carcinoma thyroid	1	1	0	4 th
3.	Poorly differentiated carcinoma nose	1	0	1	6 th
4.	Non hodgkins lymphoma	1	1	0	6 th

Out of 122 cases malignancy was reported in 13 cases (10.6%), squamous cell carcinoma was most common pathological finding (76.9% of all malignancy) peak age of presentation was 5th decade with male predominance. Single case of papillary carcinoma thyroid was reported in 40 yr old male this is contradictory to benign lesions of thyroid which were reported in females only. Single case of poorly differentiated carcinoma of nose reported with nasal obstruction & discharge in 63 yr old male. Non- Hodgkin’s lymphoma was reported in a 65 yr old male.

Discussion

Ear, nose, throat and head & neck embrace a broad field of pathological investigation. The present study included 122 cases of ENT & head and neck lesions from various age groups ranged from 6 years to 75 years. Maximum no. of patients was in the age group of 21-30 yr, Male: female ratio was 1.6:1. Site wise distribution of ENT & head and neck histopathology shows nose (28.4%) as the predominant site of lesion followed by neck (16.2%), lip (8.9%), thyroid (8.1%) and face (5.2%), rest other sites constitute around 32%.

Out of 122 cases most common lesion is benign neoplastic lesion 58 cases (47.5%), chronic inflammatory lesion was present in 51 cases(41.8%), followed by malignant neoplastic lesion in 13 cases(10.6%).

Most common lesion in our study was Sinonasal mass, Sinonasal masses had predilection for males, demonstrating a male to female ratio of 2.5:1. It was lower (male-to female ratio of 1.7:1) in the study by Zafar et al.⁽²⁾ from India, while a study from Nigeria⁽³⁾ revealed an opposite ratio showing female preponderance (M:F ratio of 1:1.2). A British review of nasal polyposis reported a ratio at 2:1 (M: F)⁽⁴⁾. The 2nd to 4th decades of life are the most vulnerable period for development of sinonasal masses. Bakari et al.⁽³⁾ had reported a peak incidence of 33 years, while for Zafar et al the mean age of presentation was 22.5 years.⁽²⁾

Most common histopathological diagnosis in our institution was rhinosporidiosis (16.3%). Rhinosporidiosis is an endemic disease in India, Srilanka & a few African nations⁽⁵⁾. We found much higher incidence of rhinosporidiosis 16.3% in comparison to similar study conducted by A. Lathi et al.⁽⁶⁾ who founded 2 cases while Pradhanga et al.⁽⁷⁾ encountered only one case during their two year study.

Inflammatory polyp is also prevalent in this region 10.6%, common in 2nd & 5th decade, equally prevalent in males & females. These polyps were typically bilateral in most of cases.

Single case (0.2% of all sinonasal mass) of poorly differentiated carcinoma of nose in male at 6th decade was reported in our study. Malignancy of sinonasal tract is rare⁽⁸⁾. The most common histological type is squamous cell carcinoma⁽⁹⁾. Pradhananga et al.⁽⁷⁾ reported 6.3% of their sinonasal masses to be malignant, while for Fasunla et al.⁽¹⁰⁾ malignant sinonasal tumours constituted 59.4% of the 138 sinonasal neoplasms seen. The highest numbers of cases were seen in the age group 61-70 years with 7 study subject.

Head and neck neoplasm constitute a major form of cancer in India accounting for 23% of all

cancer in males and 6% in females^(11,12) and approximately 5% of all childhood neoplasm.⁽¹³⁾ Increased prevalence of malignancies may be due to use of various forms of tobacco in our country. Lesions of head and neck include variety of developmental, inflammatory and neoplastic lesions.

In our study predominant lesion is epidermoid cyst 16 cases (13.1%) followed by thyroid lesions 10 cases (8.1%). In thyroid colloid/nodular goiter is predominant lesion 5 cases were reported (50%) while follicular adenoma is reported in 4 cases (40%) and single case of papillary carcinoma was detected in 60 yr old male Muddegowda et al⁽¹⁴⁾ and Rathod et al⁽¹⁵⁾ also found thyroid lesions as the predominant site of FNAC in their study with colloid goiter as the predominant finding. Female preponderance was observed in thyroid lesions in our study, similar findings reported by Rathod et al⁽¹⁵⁾ and Muddegowda et al⁽¹⁴⁾.

In lymph node lesions tubercular lymphadenitis was the most common pathological findings which is in concordance with Bhagat et al⁽¹⁶⁾, Sharma et al, Ahmad T et al and El Haq et al. Single case of hodgkins lymphoma was reported in 60 yr old male.

In salivary gland lesion pleomorphic adenoma of parotid gland is reported in 3 cases with female preponderance this is similar to finding reported by Bhagat et al(9) in his study.

Benign lesions comprised of epidermal cyst 16 cases (27.5% of benign lesion), lipoma 3 cases, haemangioma 2 cases, lymphangioma 1 case, 1 case of inverted papilloma, 1 case of spindle cell tumour, & 2 cases of epulis, were common histopathological diagnosis in soft tissue & miscellaneous lesions.

Conclusion

Our institution is a recently established centre, with steadily increasing outpatient statistics. The study was conducted in the initial years of the institute and this may be a limiting factor in establishing the true histopathological pattern in Otorhinolaryngology diseases.

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