



PAROTID GLAND TUMORS: AN EVALUATION AT TERTIARY CARE HOSPITAL.

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ABSTRACT... Objectives: To evaluate epidemiological pattern, early diagnostic tool and histological type of parotid gland tumors. **Study Design:** Prospective cross sectional study. **Setting:** Department of Oral & Maxillofacial Surgery & General Surgery Liaquat University hospital Hyderabad. **Period:** From 2013 to 2017. **Material & Methods:** Study contains 67 patients of parotid tumors after initial diagnosis. These patients were first diagnosed by FNAC (Fine needle aspiration cytology) along with CT scan & MRI where required. Final diagnosis was established after histopathological diagnosis of tumor. **Results:** Males were predominantly involved in both tumor patterns. Most common age group was 5th decade in both benign and malignant tumors. FNAC has diagnostic sensitivity of almost 90-97%. Out of 67, 51 tumors were benign and 16 were malignant. Pleomorphic adenoma was the most common benign tumor while mucoepidermoid carcinoma was found as most received malignant tumor. **Conclusion:** Pleomorphic adenoma is most commonly found benign tumor and mucoepidermoid carcinoma is found more in numbers as malignant tumor.

Key words: Benign, Malignant, Mucoepidermoid Carcinoma, Pleomorphic Adenoma, Parotid, Tumor.

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INTRODUCTION

Tumors of salivary gland represent an essential area in the field of maxillofacial surgery and pathology but are infrequent, comprising of 3% of all head and neck tumors and 0.6% of all neoplasms of the body.^{1,2,3} Parotid gland has high ratio of occurrence of salivary tumors that is about 70 to 80% , followed by submandibular gland, sublingual gland, and minor salivary gland, these tumors are also widely distributed in adults and childrens.⁴

The parotid gland is affected in a good number often, ranging from 36.6% to 83%.³ Malignant tumors are underground, taking place in 15-32% of cases.⁵ The most familiar malignant and benign tumors are the mucoepidermoid carcinoma and the pleomorphic adenoma respectively.⁶

The recent journalism roughly guesses that 80% of these lumps are benign, with pleomorphic adenoma being the most widespread and

involves parotid gland most frequently.⁴ It come about between the fourth and sixth decades of life, some have encountered between 3rd to 5th aswel.⁷ From clinical point of view the most common expression of pleomorphic adenoma is the presence of a solitary, hard, firm, lobulated, movable nodular lesion with well clear borders that is unproblematic to palpation and of extended progression. This category of tumor can be pretty huge and consistently spares the job of the facial musculature.

Mucoepidrmoid carcinoma primary reported by Massao and Berger in 1942 as a separate pathologic unit and is labeled as the frequently occurring malignancy of salivary gland, that typically shows the involvement of parotid, subamandibular, sublingual and minor salivary glands.⁸ In this vicinity the second most common malignancy seen is cystic adenoid carcinoma. Rare occurrence of parotid tumors is seen in the form of carcinoma of ex pleomorphic adenoma,

adenocarcinoma and acinar cell carcinoma.⁹

The main purpose of this study was to recognize that which pattern of parotid tumors are more common in this part of country and also to see the diagnostic accuracy of fine needle aspiration technique in the diseases of parotid gland. Definitive diagnosis is usually not done by FNA but it has the role to differentiate benign from malignant tumors.

MATERIAL & METHODS

This prospective cross sectional study with non probability purposive sampling technique is a combine work between maxillofacial surgery and general surgery department of liaquat university hospital Hyderabad.

All the data was recorded on predesigned proforma. Patients included were either gender, irrespective of age, with parotid region swelling or mass. All the patients with parotid gland mass were first assessed clinically and radiographically. Initial diagnosis was made on the basis of fine needle aspiration cytology with collaboration of pathology department. Final diagnosis was confirmed with histological confirmation (incisional or excisional biopsy). CT & MRI were carried out wherever required. Patients who were not willing for participation and those who were mentally retarded were set in exclusion criteria.

RESULTS

Figure-1 shows gender distribution: There were 49 male and 18 females patients which shows male predominance.

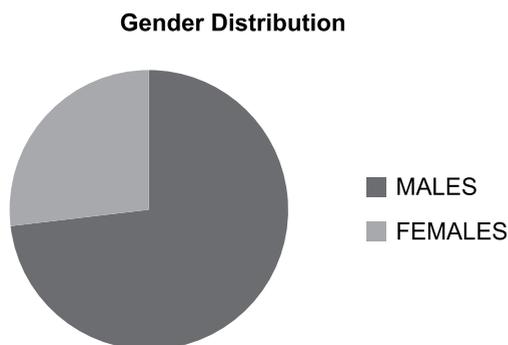


Figure-1.

Most common age group involved was fifth decade of life as shown in Table-I.

Age Group	No of Patients	%
11 to 20 years	01	1.49
21- 30 years	02	2.98
31 to 40 years	11	16.41
41 to 50 years	39	58.2
51 to 60 years	14	20.8
TOTAL	67	100%

Table-I. Showing details about age groups affected.

Figure-2 shows nature of tumor pattern: 51 patients reported with benign and 16 with malignant tumors

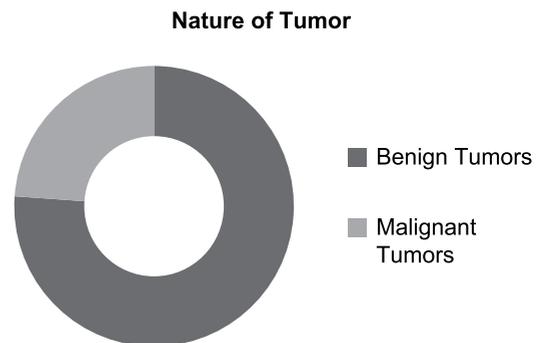


Figure-2.

Table-III&IV shows nature of tumor along with histological type diagnosed.

Histological Type	No of Patients	%
Pleomorphic Adenoma	44	86.27
Warthin Tumor	02	3.92
Lipoma	04	7.84
Schwannoma	01	1.96
TOTAL	51	100%

Table-II. Benign tumors.

Histological Type	No of Patients	%
Mucoepidermoid Carcinoma	11	68.75
Adenoid Cystic Carcinoma	02	12.5
Carcinoma of Ex-Pleomorphic Adenoma	02	12.5
Fibrosarcoma	01	6.25
Total	16	100%

Table-III. Malignant tumors

Tumor Type	FNAC Result	Histology Result
Benign	54 Patients	51 Patients
Malignant	13 Patients	16 Patients

Table-IV. Shows result of FNAC and histological report

DISCUSSION

The pathology of the salivary glands focuses on that of the parotid gland.¹⁰ In this study males are predominantly affected as compared to females in both type of tumors i.e about 73%. But the results in other parts of world shows different results like the study carried out by ES Diom¹¹ shows females predominance where 61% cases occurred in females, another study of Maahs GS¹⁰ also shows majority of patients as females.

The commonness of salivary gland tumors peaks in the sixth and seventh decades of life. Satko et al¹² reported a mean age of 53 years (ranging from 2 to 87 years). This current study shows majority of patients in fifth decade of life i.e age range of 41 to 50years, which is in support of data showed by Maahs GS.¹⁰ Here again the results of different parts of world are in contrast to this study, like study of Jude UO¹³ shows most of the patients in 3rd and 6th decade of life.

Benign tumors are most frequently found with parotid tumors as compared to malignant tumors. This study also shows high occurrence of benign as compared to malignant tumors. This resembles the literature from other parts of world.^{14,15}

Pleomorphic adenoma is most commonly encountered benign tumors in this study and mucoepidermoid carcinoma is frequently seen malignant entity. Masanja¹⁶ and Vuhahula¹⁷ found same results as shown by our study where he found pleomorphic adenoma as most commonly found tumor.

Investigative sensitivity of 100% has been seen with FNAC, while diagnostic specificity of 80%, positive predictive value of 97.0%, negative predictive value of 100% and accurateness of 97.3% for diagnosing benign parotid tumors.¹⁸ We also found the same results with FNAC like

the several studies have declared.

CONCLUSION

The profile of parotid tumor is rich and complex, as are the cell populations of the gland itself. It was concluded that benign tumors more frequently occur in parotid tumors as compared to malignant ones. Pleomorphic adenoma is most commonly found benign tumor and mucoepidermoid carcinoma is found more in numbers as malignant tumor.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Agha Taj Mohammed	Principal author, Data collection.	
2	Sajda Khuhawar	Results, Discussion.	
3	Bibi Gulsama	Data collection.	
4	Salman Shams	Manuscript Designing, References.	