RESEARCH PAPER | Medical Science | Volume : 6 | Issue : 3 | March 2016 | ISSN - 2249-555X | IF : 3.919 | IC Value : 74.50

# A Three Years Study of Fnac of Salivary Gland Lesions in A Tertiary Care Hospital

KEYWORDS: Salivary gland,Neoplasms.

**Barnali Das**
Associate Professor,Department of Pathology,Gauhati Medical College,Assam.

**Deep Jyoti Kalita**
Post Graduate Trainee,Department of Pathology,Gauhati Medical College,Assam

**ABSTRACT** *The proximity of tissues of various types and the wide range of primary and metastatic neoplasms are responsible for the region of Salivary gland being among the most interesting and challenging in FNAC diagnosis.Salivary gland neoplasms accounts for less than 2% of all neoplasms of the body.FNAC is employed in pre-operative diagnosis of all the salivary gland neoplasms.Superficial locations of the salivary glands make them suitable for FNAC.Here we present a 3 years study of Salivary gland lesions in a tertiary care hospital of North East India.Out of 126 cases 35.71% were malignant and 64.29% were benign.Pleomorphic adenoma was the most common benign neoplasm(56.35%) while Mucoepidermoid carcinoma was the most common malignant neoplasm.Most of the cases were reported in the third decade of life.*

## INTRODUCTION

Though salivary gland neoplasms contribute only a minor proportion of the neoplasms of the human body,yet a wide variety of tumours of these glands and insufficient tumour cells in aspiration cytology make the diagnosis difficult in some patients.The rate of malignancy increases from 20-25% in the parotid glands to 40-50% in the submandibular gland and to 50-81% in the sublingual gland.

Fine needle aspiration still remains the mainstay of evaluation of salivary neoplasm.It has been applied routinely as a useful method to diagnose salivary gland and to differentiate between malignant and benign lesions.FNAC has allowed a drastic reduction in unnecessary surgeries with salivary gland lesion.FNA is comparable to intraoperative frozen section in salivary tumours.The sensitivity of diagnosing Pleomorphic Adenoma by FNA cytology is as high as up to 94%.

## MATERIALS AND METHODS:

The study was carried out for a period of 3 years from August 2012 to July 2015 at a tertiary care hospital of North East India.A total number of 126 cases which attended the SOPD & ENT OPD with various complaints related to cheek(Swelling,pain etc) were selected for study purpose.

Clinical records and details of information such as age,onset of illness,duration,site,size,lymph node status etc which carry special importance in pathological diagnosis were obtained from the Clinical records department. All the patients under went FNA which was performed using 23 G needle 10 ml syringe.The character of aspirate was noted and routine smears were prepared.The air dried nad ethanol fixed smears were stained with May Grunwald Giemsa stain and Papanicolaou's stain.

## RESULTS

**In** our study we included 126 cases.The youngest case was reported of 9 years and oldest case was of 71 years. Out of these cases 86(68.25%) were males and 40 cases (31.75%) were female.Maximum incidence of cases were reported in the third decade of life.Out of all cases 81 cases(64.23%)were benign and 45 cases(35.71%) were malignant.Pleomorphic Adenoma was the most common neoplasm in all age groups.It was reported in 71 cases(56.35%).Amongst other benign neoplasms there were 8 cases (6.35%) of Myoepithelioma.Warthin's tumour was reported in 4 cases(3.17%)Mucoepidermoid Carcinoma was the most common malignant neoplasm with 28 cases out of 45 malignant cases(62.22%)It was followed by 7 cases of Adenoid Cystic Carcinoma(15.56%).3 cases were each of acinic cell carcinoma and Carcinoma ex pleomorphic adenoma(6.67%) cases.Parotid gland was the most common gland to be affected Out of all cases 82 cases (65.16%) patient had parotid involvement,26 cases(20.63%) had submandibular,8 cases(6.35%) had sublingual and 10 cases (7.93%) had minor salivary gland involvement.

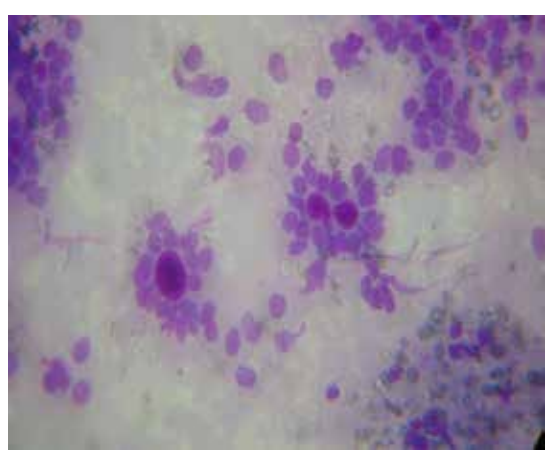

**Fig: Photomicrograph of Adenoid Cystic Carcinoma, 10x10,MGG.**

## DISCUSSION:

Salivary gland tumours have always been of interest to pathologists and surgeon alike.In the diagnosis of gland lesions ,FNAC has gained the popularity as diagnostic tool due to its low cost and safe procedure with minimal risk to the patient and aid to the clinicians in the management planning.

In our study, a characteristic male predominance was seen.Male :Female was 2.025.This was high as compared

Volume : 6 | Issue : 3 | March 2016 | ISSN - 2249-555X | IF : 3.919 | IC Value : 74.50

to study of Junu Devi et al where the ratio was 1.4:1. It was also higher than other recent Indian studies. Maximum lesions were encountered in the age group of 21-30 years.This was also the finding of Junu Devi et al,Chetan Jain,Nanda et al.Benign neoplastic lesions were reported in 64.23% of the cases which correlates well with studies of Uma Tayal et al,Nguansangiam et al.Various authors have reported malignant neoplasms ranging from 15-32%.Uma et al reported 19.8% of malignant cases in their study of 126 cases.We reported 35.71% malignant cases.The high incidence of malignant lesions can be attributed to the late presentation of cases,food habits etc.Cancer in the head and neck region has been reported at a high rate in the North Eastern part of the country.Pleomorphic Adenoma was the most common lesion with 71 cases(56.35% ).This corresponds with almost all studies carried out in India. Uma et al reported pleomorphic adenoma in 67.4% of cases,Junu Devi et al reported 61.90% of their cases as Pleomorphic adenoma.This was also the finding of Pinkstno and Chetan Jain.Among the all salivary gland parotid gland was most common to be

involved (65.16%).Mucoepidermoid carcinoma was the most common malignant lesion with 28 cases which accounts for 62.22% cases of all malignant lesions.Findings of malignant neoplastic lesions were similar to those of Nanda et al and Michael Cohen's ,Jayaram et al.All of them found Mucoepidermoid carcinoma to be the most common malignant lesion in their study.It was also the finding of Uma Tayal et al who found mucoepidermoid carcinoma in 44.2% cases of all malignant lesions.

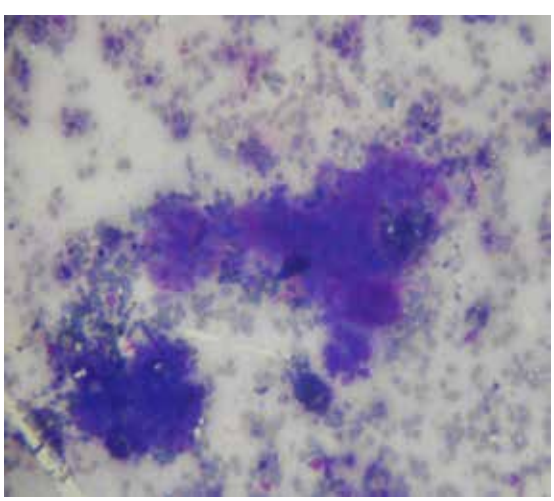

**Fig: Photomicrograph of Mucoepidermoid carcinoma 10x10 MGG.**

**CONCLUSION:**

Pleomorphic adenoma and Mucoepidermoid Carcinoma were found to be the most commonly occurying benign and malignant lesions in our study.However it can be mentioned that diagnostic difficulties are often encountered while reporting these lesions.As for example a cellular pleomorphic adenoma on FNAC needs to be differentiated from adenoid cystic carcinoma,myoepithelioma and monomorphic adenoma.Certain guidelines can be formed in order to avoid the pitfalls to a certain extent.It is also recommended that FNAC reports should be limited to differential diagnosis at times.Still FNAC has a quite high rate of accuracy and is quick procedure and is cost effective. Communication between clinician and cytopathologist can solve lot of riddles at time.

**REFERENCES**


1. Dr. Uma Tayal et al.FNAC of salivary gland lesion-a study of 126 cases at a tertiary care center of national capital region India.Journal of Medical and Dental Science Research,Volume 1-Issue 2(2014)pp:04-06.
2. Junu Devi et al.Salivary gland neoplasms:A clinicopathological study of 84 cases.International Archieves of Integrated Medicine,Vol.2,Issue 4, April, 2015.
3. Dr.Pratik Desai et al.Diagnostic Accuracy of Fine needle aspiration cytology and histopathology in salivary gland lesions.Indian journal of applied research.Vol.3,Issue 11,November 2014.
4. Sunil Kumar Y,et al.Role of Fine needle aspiration cytology in salivary gland tumours in correlation with their histopathology:A two year prospective study,Journal of clinical and diagnostic Research,2011; 5(7):1375-1380.
5. Singh NandabKD,Mehta A,Nanda J.Fine needle aspiration cytology:A reliable tool in the diagnosis of salivary gland lesion.Journal of oral pathology of medicine, 2012; 41:106-112.