

Cytohistrological Study of Salivary Glandular Lesions in Urban and Rural Areas of District Multan

ZARTAJ KASHIF, SONIA ZAFAR, KANWAR SAJID ALI, RIDA FATIMA, TAHREEM KASHIF, FARAH IQBAL, MUSTAFA ALI SIDDIQUI

¹Associate Professor Histopathology Bakhtawar Amin Medical & Dental College Multan.

²Obstetrics and Gynecologist DHQ Hospital Jhang.

³Assistant Professor Histopathology Bakhtawar Amin Medical & Dental College Multan.

⁴HO, Nishtar Hospital Multan

⁵Resident, Chemical Pathology Combined Military Hospital Multan.

⁶WMO Radiology Nishtar Hospital Multan.

⁷Professor Radiology CPEIC Multan

Correspondence: Dr. Zartaj Kashif, zertazkashif@yahoo.com Cell: 0336 6121201

ABSTRACT

Background: FNAC is a cost effective, quick, reliable and helpful method in diagnosing salivary glandular entities.

Aim: To find out cytohistrological spectrum of lesions in salivary glands in Urban and Rural areas Multan.

Methodology: The study was conducted in the Pathology Department of Bakhtawar Amin Medical & Dental Hospital, Multan. A total number of 100 patients between age 10 to 70 years with swelling in salivary glands were included in this cross-sectional study. In all patients FNAC was done and clot taken and processed for histological correlation. Few cases are also later confirmed by biopsy (excision/incision) specimen.

Results: The study reveals 65% (65/100) non cancerous lesions, followed by 20% (20/100) benign tumors and 15% (15/100) malignant tumors. Parotid gland effected in 50 % (50/100), followed by submandibular gland 40% (40/100) and minor salivary glands 10% (10/100).

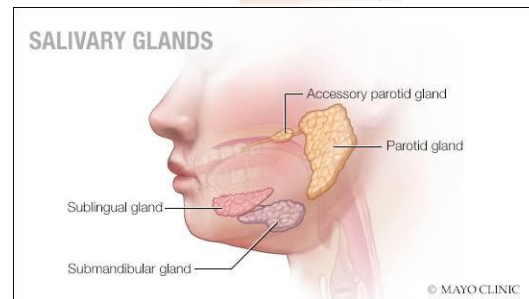
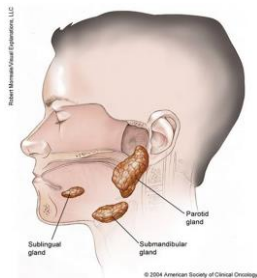
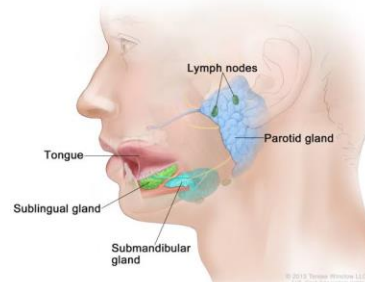
Conclusion: There is high prevalence of Nonneoplastic lesions in salivary glands that accounted for 65% (65/100). The elevated precision of FNAC confirms that pre operative cytology is a valuable, rapid, trustworthy analytic method for quick analysis and appropriate for developing countries.

Keywords: Salivary gland, FNAC

INTRODUCTION

Salivary glands are exocrine organs responsible for production and secretion of saliva and consist of parotid, sublingual, submandibular and the minor glands that are plentiful and broadly distributed throughout the mouth and oropharynx¹. Salivary gland neoplasms account for 6% of all head and neck tumors¹. FNAC is a useful method for assessing doubtful salivary glands lesions due to its cost effectiveness and high sensitivity². On FNAC, lesions can be divided into inflammatory, reactive, benign, or malignant and for planning the management of the lesion³.

Anatomy of the Salivary Glands





FNAC is an effective technique for assessing doubtful salivary glands lesions due to its cost effective and cost beneficial analysis, with low morbidity, quick analysis time, high specificity, and sensitivity.

METHODOLOGY

The study was conducted in the Pathology Department of Bakhtawar Amin Medical & Dental College & Hospital, Multan. A total number of 100 patients between ages 10 years to 70 years with lesion in salivary glands were included in this cross-sectional study. In all patients FNAC was done and blood clot collected in the syringe and processed for histological correlation. IN few cases biopsy specimens were also taken where clot study was not up to the mark or suspicious.

In present study 100 cases were included FNA was performed by using a 23/24-gauge needle without local anaesthesia.

RESULTS

In present study, nonneoplastic lesions in salivary glands accounted for 65% (65/100), followed by 20% (20/100) benign tumours and 15% (15/100) malignant tumours. Commonest gland involved was parotid 50 %, (50/100), followed by submandibular gland (40%, 40/100) and minor salivary glands (10%, 10/100) where as sublingual salivary gland lesions observed in the present study were nil. The most common benign tumor was Pleomorphic adenoma followed by Warthins tumor

In non neoplastic lesions, FNAC specific diagnosis of all cases were correlated with histo pathological findings as in Figures 1-8

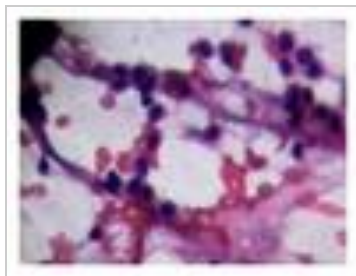


Figure 1: Chronic sialadenitis

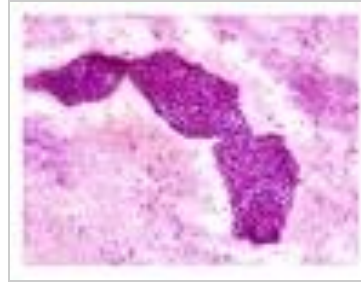


Figure 2 : Warthin tumor:

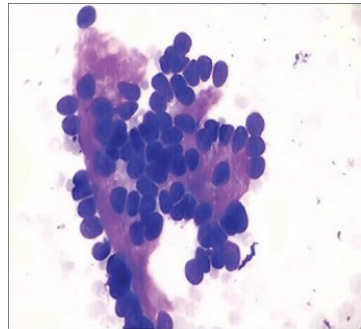


Figure 3: Cytological smear shows case of pleomorphic adenoma

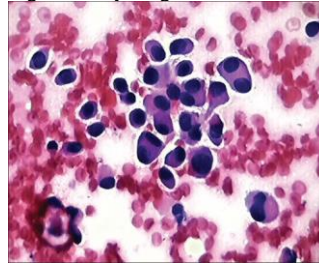


Figure 4: Smear shows case of pleomorphic adenoma

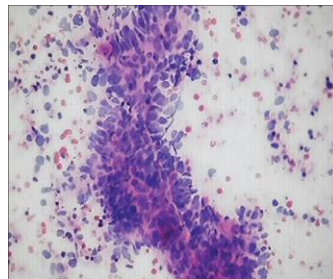


Figure 5 : Smear shows case of Warthins tumor

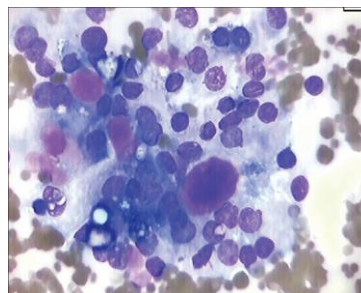


Figure 6: Cytological smear case of adenoid cystic carcinoma

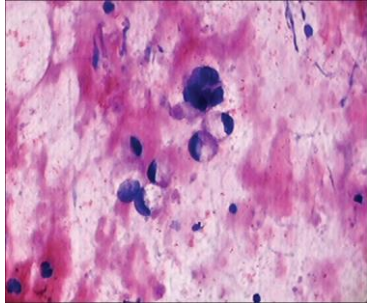


Figure 7: Cytological smears show case of mucoepidermoid carcinoma,

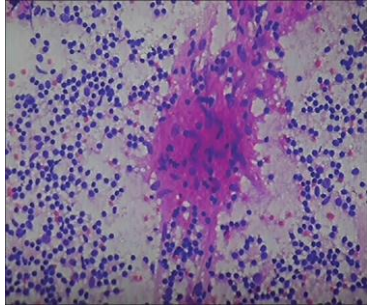


Figure 8: Smear shows epithelioid cell granuloma in case of tuberculosis of submandibular gland

DISCUSSION

FNAC is a precise technique in the diagnosis of salivary gland lesions. It is cost effective and cost beneficial method having least risks⁴. It also helps the health care providers for managing the salivary gland lesions. Unsatisfactory results ranges from 2-11 %⁵⁻¹³

This may be due to sampling faults and human errors.

CONCLUSION

FNAC high accuracy confirms that pre operative cytology is a valuable, rapid, trustworthy analytic method for quick analysis and appropriate method of diagnosis for developing countries.

REFERENCES

1. L. Barnes, J. W. Eveson, P. Reichart, and D. Sidransky, "Pathology and genetics of head and neck tumors," in World Health Organization Classification of Tumors, P. Kleihues and L. H. Sobin, Eds., p. 210, IARC Press, Lyon, France, 2005.

2. M. A. S. Frable and W. J. Frable, "Fine-needle aspiration biopsy of salivary glands," *Laryngoscope*, vol. 101, no. 3, pp. 245–249, 1991.
3. M. W. Stanley, R. H. Bardales, C. E. Farmer et al., "Primary and metastatic high-grade carcinomas of the salivary glands: a cytologic-histologic correlation study of twenty cases," *Diagnostic Cytopathology*, vol. 13, no. 1, pp. 37–43, 1995.
4. A. H. Qizilbash, J. Sianos, J. E. M. Young, and S. D. Archibald, "Fine needle aspiration biopsy cytology of major salivary glands," *Acta Cytologica*, vol. 29, no. 4, pp. 503–512, 1985.
5. S. Nguansangiam, S. Jesdapatarakul, N. Dhanarak, and K. Sosrisakorn, "Accuracy of fine needle aspiration cytology of salivary gland lesions: routine diagnostic experience in Bangkok, Thailand," *Asian Pacific Journal of Cancer Prevention*, vol. 13, no. 4, pp. 1583–1588, 2012.
6. L. G. Tan and M. L. Khoo, "Accuracy of fine needle aspiration cytology and frozen section histopathology for lesions of the major salivary glands," *Annals of the Academy of Medicine Singapore*, vol. 35, no. 4, pp. 242–248, 2006.
7. H. Mihashi, A. Kawahara, M. Kage et al., "Comparison of preoperative fine-needle aspiration cytology diagnosis and histopathological diagnosis of salivary gland tumors," *Kurume Medical Journal*, vol. 53, no. 1-2, pp. 23–27, 2006.
8. I. S. Jan, P. Chung, M. Weng et al., "Analysis of fine-needle aspiration cytology of the salivary gland," *Journal of the Formosan Medical Association*, vol. 107, no. 5, pp. 364–370, 2008.
9. A. A. Choudhury, T. Sultana, B. H. Siddique, and A. S. A. Amin, "Diagnosis of parotid gland mass by the fine needle aspiration cytology (FNAC) and its histopathological correlation—2 years study in BSMMU, Dhaka," *Bangabandhu Sheikh Mujib Medical University Journal*, vol. 4, no. 2, pp. 65–69, 2011.
10. R. S. Cajulis, S. T. Gokaslan, G. H. Yu, and D. Frias-Hidvegi, "Fine needle aspiration biopsy of the salivary glands: a five-year experience with emphasis on diagnostic pitfalls," *Acta Cytologica*, vol. 41, no. 5, pp. 1412–1420, 1997.
11. P. Boccato, G. Altavilla, and S. Blandamura, "Fine needle aspiration biopsy of salivary gland lesions: a reappraisal of pitfalls and problems," *Acta Cytologica*, vol. 42, no. 4, pp. 888–898, 1998.
12. D. K. Das, M. A. Petkar, N. M. Al-Mane, Z. A. Sheikh, M. K. Mallik, and J. T. Anim, "Role of fine needle aspiration cytology in the diagnosis of swellings in the salivary gland regions: a study of 712 cases," *Medical Principles and Practice*, vol. 13, no. 2, pp. 95–106, 2004.
13. T. Atula, R. Grenman, and P. Laippala, "Fine-needle aspiration cytology of submandibular gland lesions," *The Journal of Laryngology & Otology*, vol. 109, no. 9, pp. 853–858, 1995.