ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 06 | June - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

WARTHIN'S TUMOUR – A DIAGNOSTIC DILEMMA

Otorhinolaryngology

Dr Komal Garg	M.S., Senior Resident, Dept. of Otorhinolaryngology – Head and Neck Surgery, Noida International Institute of Medical Sciences (NIIMS), NIU,Greater Noida, U.P.
Dr Avinash Kumar*	M.S., Associate Professor, Dept. of Otorhinolaryngology – Head and Neck Surgery, Noida International Institute of Medical Sciences (NIIMS), NIU, Greater Noida, U.P. *Corresponding Author
Dr (Col) Arun Chaudhary	MD, Professor and HOD , Dept. of Pathology, Noida International Institute of Medical Sciences (NIIMS), NIU ,Greater Noida, U.P.
Dr Shubham Mittal	DNB, Assistant Professor, Dept. of Otorhinolaryngology – Head and Neck Surgery, Noida International Institute of Medical Sciences (NIIMS), NIU ,Greater Noida, U.P.
Dr Himani Sharma	MS, Assistant Professor, Dept. of Otorhinolaryngology – Head and Neck Surgery Noida International Institute of Medical Sciences (NIIMS), NIU, Greater Noida, U.P.

ABSTRACT

Salivary gland lesions form about 2- 6.5% of all head and neck neoplasm in adults. Among benign salivary gland tumours, Warthin's tumour is second most common tumour involving parotid gland. Here, we present a case of 58 year old male smoker patient who presented to us with swelling in right parotid region. Diagnosis was established with the help of ultrasound, computed tomography and fine-needle aspiration cytology, and thereafter, patient was taken up for surgical excision under general anesthesia. This case report highlights the classic presentation of Warthin's tumour in old age male smoker patient.

KEYWORDS

INTRODUCTION

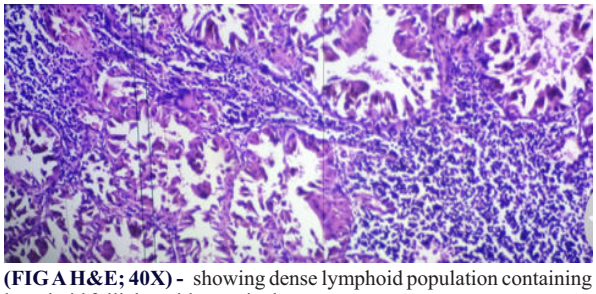
Salivary gland lesions form about 0.5% of all cancers and 2–6.5% of all head and neck neoplasms in adults[1]. Tumours of salivary gland are relatively uncommon, but they have multifaceted clinical presentation and varied morphological configuration[2]. Among benign salivary gland tumour, pleomorphic adenoma is most common followed by Warthin's tumour. Warthin's tumor is a benign neoplasm predominantly found in the parotid gland of the salivary glands. It was initially described in 1929 by Aldred Scott Warthin. Warthin's tumor is synonymous for papillary cystadenoma lymphomatosum, adenolymphoma, and cystadenolymphoma. It makes up 14% to 30% of parotid tumors. It occurs between the sixth and seventh decades of life, with male predominance and has been found to be associated with smoking [3,4].

Case Report

A 58 year old male presented to us with complaints of swelling in right parotid region since last 3 years. The patient was a chronic smoker since last 30 years, smoking on an average 1 pack year. On examination, there was a solitary, well circumscribed swelling in right infraauricular and preauricular region measuring 3X2.5cm in size. The colour and surface texture of overlying skin was similar to adjacent skin. On palpation, swelling was non-tender, non-warm, soft to firm in consistency, mobile with overlying skin not involved.

Patient underwent ultrasound neck which showed heterogenous hypoechoic mass of size 23X26X42mm in superficial lobe of right parotid gland. Fine needle aspiration cytology was suggestive of pleomorphic adenoma. In cytology it is difficult to form a proper diagnosis because of overlapping features. And so histopathology is mandatory to come to a proper diagnosis. CT finding shows well defined soft tissue mass measuring 3X2.5 cm in right superficial lobe of parotid gland.

Patient underwent Superficial Parotidectomy under General Anesthesia preserving facial nerve trunk along with its branches and greater auricular nerve. Intraoperatively, 3.5X2.5X1 cm cystic mass along with right superficial lobe of parotid gland was removed and send for histopathological examination. On cutting the specimen, mucoid material came out. On histopathology, it shows papillary architexture. The papillae was lined by bilayered oncocytic epithelial cells and surrounding stroma shows dense lymphoid population containing lymphoid follicles with germinal centre.(FIGURE A) These findings were suggestive of Warthin's tumour. Patient is under regular follow up and care.



(FIG A H&E; 40X) - showing dense lymphoid population containing lymphoid follicles with germinal centres.

DISCUSSION

Most Salivary gland tumours (80–85%) arising from major salivary glands are benign. Among them, Warthin tumors are generally considered the second most common histology (with an incidence ranging from 8 to 30% of all SGTs) after pleomorphic adenoma (64–80%) and involve almost exclusively the parotid gland[5]. The site of occurrence is restricted to the parotid gland and surrounding lymph nodes, with a high frequency of simultaneous or ectopic multiple or bilateral occurrence[6] . Differently from pleomorphic adenomas, Warthin's tumours are characterized by an extremely low potential for malignant transformation (less than 0.1% of the cases)[7]. They are frequently an incidental finding during oncological follow-up in patients affected by malignant diseases. In fact, Warthin's tumour have a typical high glucose uptake in PET imaging, which can lead to a misdiagnosis as a distant recurrence[8].

When compared to other benign parotid tumors, it has been found to occur in a significantly older age group (mean 60 years vs 48 years) with male gender more prevalent (61% vs 33%) and mostly found in the parotid tail (86% vs 61%)[9]. Incidence of warthin's tumour is reported high after radiation exposure and smoking. Clinically it remains asymptomatic in 90% of the patients[3].

Diagnosis is made with the help of radiological investigation and pathological investigation (fine needle aspiration cytology). Preoperative imaging plays an important role in further management and helps us in guiding for fine needle aspiration cytology if lesion is

too small. Ultrasound examination (USG) neck is considered as first line imaging modality because of its high sensitivity; it is also quick, noninvasive and free from radiation, and easily available[10].

MRI seems the best diagnostic imaging modality as it is superior in differentiating soft tissue and detecting deep tissue extension. MRI can also be helpful in detecting perineural spread, any extracapsular involvement, and nerve involvement and can also differentiate from edema[11].

Pathological diagnosis is usually done with fine needle aspiration cytology. However, it can leads to seedling of tumour and have low sensitivity and accuracy i.e. 70% and 91%[12]. FNAC specimens from parotid glands are difficult to diagnose for a number of reasons, including problems in sampling as well as difficulty in histological classification. A major roadblock in the histologic classification of salivary gland neoplasms is that the majority of these arise from the same cell lines (epithelial and myoepithelial)[13].

In this case also, on FNAC it was suggestive of pleomorphic adenoma and on histopathology, it was suggestive of Warthin's tumour.

Warthin's tumor is clinically indistinguishable from other benign lesions of the parotid. Histopathologically, Warthin's tumor has a highly distinctive morphology and generally poses no problem in diagnosis.

It is composed of bilayered oncocytic and basaloid epithelium forming cystic structures, papillae and glands that are accompanied by a dense lymphoid stroma.

It needs to be differentiated from oncocytoma, squamous cell or mucoepidermoid carcinoma and a variant of papillary thyroid carcinoma recently reported as "Warthin-like[3].

CONCLUSION

This case report highlights the typical features of Warthin's tumour in parotid gland and combined approach of clinical examination, radiological and pathological investigation. Despite diagnostic pitfalls non-guided palpable FNAC still continues to be widely used diagnostic technique in developing countries due to its quick results and lack of complications.

Images With Legends

IMAGE 1 – Right Parotid swelling

IMAGE 2 – Intraoperative picture showing terminal branches of facial nerve.

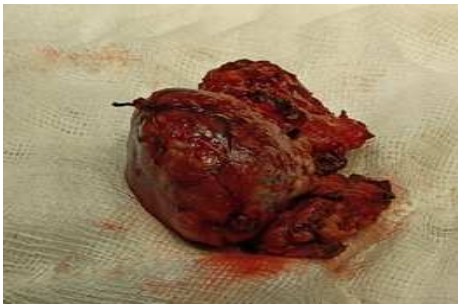


IMAGE 3 – GROSS SPECIMEN

REFERENCES

1. Khandekar MM, Kavatkar AN, Patankar SA, Bagwan IB, Puranik SC, Deshmukh SD (2006) FNAC of salivary gland lesions with histopathological correlation. Indian J Otolaryngol Head Neck Surg 58:246–248.
2. Wahiduzzaman M, Barman N, Rahman T, Khan ME, Islam MT, Bhuiyan MZ (2013) Major salivary gland tumors: a clinicopathological study. J Shaheed Suhrawardy Med Coll 5:43–45
3. Faur A, Lazăr E, Cornianu M, Dema A, Vidita CG, Găluşcan A. Warthin tumor: a curious entity- -case reports and review of literature. Rom J Morphol Embryol .2009; 50(2):269-73.
4. Robert L. Hatch, MD, and Sejal Shah, BS. Warthin Tumor: A Common, Benign Tumor Presenting as a Highly Suspicious Mass. J Am Board Fam Pract. 2005; 18(4):320-2.
5. Alsanie, I.; Rajab, S.; Cottom, H.; Adegun, O.; Agarwal, R.; Jay, A.; Graham, L.; James, J.; Barrett, A.W.; van Heerden, W.; et al. Distribution and Frequency of Salivary Gland Tumours: An International Multicenter Study. Head Neck Pathol. 2022, 16, 1043–1054.
6. Karthikeya, P.; Mahima, V.G.; Shalini, K. Papillary cystadenoma lymphomatosum: Case report and review of literature. Indian J. Dent. Res. 2005, 16, 153–158.
7. Fisher, R.; Ronen, O. Cytologic Diagnosis of Parotid Gland Warthin Tumor: Systematic Review and Meta-Analysis. Head Neck 2022, 44, 2277–2287.
8. Rassekh, C.H.; Cost, J.L.; Hogg, J.P.; Hurst, M.K.; Marano, G.D.; Ducatman, B.S. Positron Emission Tomography in Warthin's Tumor Mimicking Malignancy Impacts the Evaluation of Head and Neck Patients. Am. J. Otolaryngol. 2015, 36, 259–263.
9. Patel DK, Morton RP. Demographics of benign parotid tumours: Warthin's tumour versus other benign salivary tumours. Acta Otolaryngol. 2016; 136(1):83-6.
10. Yariv O, Popovtzer A, Wasserzug O, Neiderman NC, Halperin D, Lahav Y, Lahav G, Yehuda M (2020 Jan-Feb) Usefulness of ultrasound and fine needle aspiration cytology of major salivary gland lesions. Am J Otolaryngol 41(1):102293.
11. Lee YYP, Wong KT, King AD, Ahuja AT (2007) Imaging of salivary gland tumours. Acad Radio 14:701–710
12. Jaafari-Ashkavandi Z, Ashraf MJ, Moshaverinia M (2013) Salivary gland tumors: a clinicopathologic study of 366 cases in southern Iran. Asian Pac J Cancer Prev 14:27–30.
13. Hijab Shah, Anwar Ul Haque. Factors Liable for Misinterpretation of Salivary Gland Neoplasms on Fine Needle Aspiration Cytology.Int. j. pathol 2013; 11(2):42-42;11(2): 64-69.