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A Case of Faster Growing Warthin's Tumour in Primary Care

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Abstract

Warthin's tumor also known as papillary cystadenoma lymphomatosum is a benign tumor of salivary glands. It usually presents with slow growing painless swelling predominantly in parotid gland. The diagnosis is suggested by clinical presentation and radiological investigations but requires histopathological confirmation. Warthin's tumor is managed with surgical excision and has very low risk of recurrence or malignant transformation. We describe a case of Warthin's tumor with relatively faster growth rate. The aim of this case report is to review the clinico-pathological features of Warthin's tumor and raise awareness among physicians about the presenting features of this tumor. This knowledge will enable them to make accurate diagnoses and refer patients for appropriate treatment.

Introduction

Patients often present to physicians complaining of swellings in their neck. Salivary gland especially parotid gland tumors are important cause of neck swelling in adults. Although most of these are benign, however, in smokers and elderly, this may be the initial presentation of a life-threatening disease.[1] Warthin's tumor also known as papillary cystadenoma lymphomatosum accounts for around 10-15% of all parotid gland tumors. Warthin's tumor is benign and very slow growing with low risk of malignant transformation. Strong association with smoking has been reported in literature.[2] The benign neoplasm has unique histological appearance showing multiple cysts that have numerous papillations covered by bilayered columnar and basaloid oncocytic epithelium. We report a case of Warthin's tumor in the left parotid gland with growth relatively faster than expected of few weeks duration in a 50-year-old male patient and discuss clinico-pathological features of this tumor based on comprehensive literature review.

Case Report

A 50-year-old male patient attended the Ear, Nose and Throat (ENT) clinic after being referred by family physician at a private hospital of Karachi, Pakistan. He presented with complaint of painless swelling of his left lower side of the face below left ear, noticed for few weeks. There was no history of pain, altered sensations, bleeding or discharge from the swelling. There was no fever, weight loss, and difficulty in swallowing or lymph node enlargement in neck or other body site. His medical history was significant for presence of pre-diabetes, mild dyslipidemia and fatty liver. His family history was positive for Hodgkin's lymphoma in his mother. He was a smoker for the last 20 years.

The examination showed a mobile swelling approximately of 4x3cms in size near left angle of mandible. There were no signs of inflammation

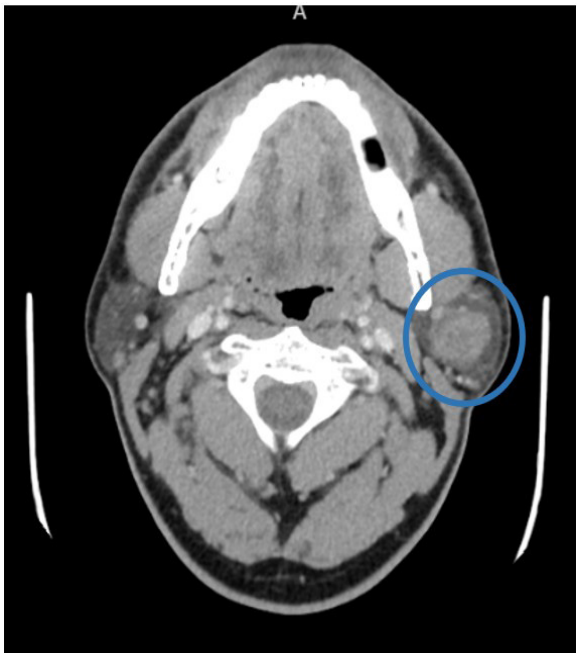

Figure 1: *CT scan showing solid lesion in left parotid gland*

including redness, warmth or tenderness. The swelling was fluctuant and soft on palpation. The cervical lymph nodes were not enlarged. The facial nerve was intact on examination. Intraoral examination revealed erythematous mucosa and swelling on the left side. Based on history and physical examination, the provisional clinical diagnosis of parotid gland tumor, most likely pleomorphic adenoma was made. Ultrasonography was recommended which showed well circumscribed hypo-echoic lesion with internal echoes without internal vascularity in the left parotid gland measuring approximately 29x17x17 mm in size. Provisional diagnosis of a cystic parotid gland swelling was made on ultrasound. Computed tomogram (CT) scan showed a solid appearing well defined soft tissue lesion within the substance of left parotid gland measuring 25x22 mm. (picture1) It was not breaching the margins of the parotid gland and had CT density of 70 House field units. Sub centimeter lymph nodes were noted in both sides of the neck. No evidence of significant upper mediastinal or supraclavicular lymphadenopathy was present. Based on CT and ultrasound appearances, findings were suggestive of pleomorphic adenoma, however the other differentials of salivary gland tumors could not be ruled out. Fine needle aspiration cytology (FNAC) and biopsy were recommended. The FNA smear showed "oncocytes forming flat sheets and occasional papillae with few single cells. The nuclei were round and uniform with granular chromatin and eosinophilic granular cytoplasm admixed with lymphocytes exhibiting reactive pattern. Features were suggestive of Warthin's tumor.

The patient underwent left superficial parotidectomy. The gross examination of the excised mass revealed 3x3 cms. tumor on left superficial parotid lobe adherent to facial nerve. After standard draping and preparation, an incision was given on left preauricular region, flap was raised over the tumor and facial nerve was traced via tunneling, lifting and cutting. All branches of facial nerve were identified and secured, and tumor was exposed. The tumor was freed in its entire orientation and JP drains were left in place. The patient recovered uneventfully post-operatively and drains were removed on 2nd post-operative day. The facial nerve was intact on examination.

Histopathology report was as follows:

Sections examined reveal a cystic neoplastic lesion composed of double layer of epithelial cells resting on dense lymphoid stroma with variable germinal centers. The epithelial layer is composed of palisading of oncocytic columnar cells with underlying discontinuous basal cells. In some sections, salivary gland tissue is seen on the periphery. The lesion is less than 0.1 cm from the inked margin. There is no evidence of malignancy. Diagnosis: Warthin's tumor. Negative for malignancy.

One year follow up was negative for recurrence on either side.

Discussion

Around 3% of all head and neck malignancies are salivary cancers, most of these are in the parotid glands.[3] Approximately 80% of salivary gland tumors occur in the parotid gland and approximately 75- 80% of these are benign. Most benign parotid tumors are slow growing, painless masses often in the tail of the parotid gland. The most common salivary gland tumor is the pleomorphic adenoma which comprises about half of all tumors and 65% of parotid gland tumors. It is also the most common minor gland lesion representing 40% of intraoral tumors and about 50% of those on the palate. Warthin's tumor is the second most common benign lesion.[1] The most common malignant tumor is mucoepidermoid carcinoma, followed by acinic cell carcinoma and adenoid cystic carcinoma.[4]

Warthin's tumor accounts for 5-20% of all salivary gland tumors.[5,6] It is slow growing with average 8% growth per year, with an approximate doubling time of 9 years, but can have a wide range of growth rates. It involves almost exclusively the parotid gland, especially the inferior part and peri parotid lymph nodes and present bilaterally in 5-17% of the patients. It is more frequently reported between 40 to 70 years of age with an average age at diagnosis of 62 years. 5,6 Although it is more common in males but due to increasing rates of smoking in females, the sex ratio has shown tendency of equalization in last few decades. The association between smoking and Warthin's tumor has been reported since 1980's with 8-fold increase in smokers as compared to non-smokers. This is hypothesized to be caused by the retrograde flow of substances in tobacco

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smoke into salivary ducts or by excretion of substances from smoke into the ducts.[1,7] The other risk factors hypothesized include exposure to ionizing radiations (in atomic bomb survivors) and autoimmune diseases (e.g., thyroiditis).[1,7] It usually presents as a slow growing fluctuant mass in lower portion of parotid gland. Magnetic resonance imaging (MRI) is the best and most accurate imaging method and provides detailed description about extension of the mass, but it is more expensive and time consuming. CT scan is more accessible method. Ultrasound is important in guiding FNAB, allows the radiologist to evaluate solid and cystic component and facilitates to sample the solid tumor component.[1] Histopathology remains the main stay of diagnosis and FNAB of parotid gland has high specificity (98%), moderate sensitivity (78%) and excellent accuracy (96%) in differentiating between benign and malignant lesions. On histopathology, Warthin's tumor is composed of varying proportions of papillary- cystic structures lined by oncocytic epithelial cells and a lymphoid stroma with germinal centres. The epithelial component is formed of inner columnar and outer cuboidal cells. Some foci of mucous, ciliated, sebaceous, and squamous cells can be present in Warthin's tumors. The recommended treatment of Warthin's tumor is surgical removal which can be easily performed due to the superficial location of the tumor. Some surgeons prefer local resection with surrounding tissue; others choose superficial parotidectomy in order to avoid the rupture of tumor capsule.[1,7] The risk of malignant transformation is very rare, and recurrence is very uncommon, however, multifocality and bilaterality is frequent, especially in heavy smokers.[1]

Conclusion

The current report presents the case of painless swelling of parotid gland in a 50-year-old smoker with relatively faster growth. History, clinical examination and investigations were suggestive of benign salivary gland lesion but because of personal history of smoking and family history of lymphoma, it was essential to rule out malignancy. The final diagnosis was achieved only after the cytological and histopathological examinations guiding the treatment plan. Although typically, Warthin's tumor is slow growing, but our case report describes a case of Warthin's tumor with a relatively faster growth rate. This case highlights the importance of considering Warthin's tumor in the differential diagnosis of rapidly growing parotid gland tumors.

Consent for Publication: Informed consent was taken from the patient for publication.

Conflicts of Interest: The authors do not report any conflict of interest.

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