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CASE REPORT

Warthin Tumour: A Case Report and Approach in Primary Care.

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Abstract

Warthin tumour (WT) is an infrequent benign salivary gland neoplasm, that primarily occur in the parotid gland, the largest of the salivary glands. Comprising roughly 15% of all salivary gland tumours, these lesions are the second most prevalent type of salivary gland neoplasm after pleomorphic adenoma encountered in clinical practice. Here, we report a case of Warthin tumour of six years' duration in a 46-year-old male patient in the left parotid gland and will discuss the diagnostic process, differential diagnoses, and management of a suspected WT in a primary care setting. While Warthin tumours are generally considered to be non-malignant, they can mimic carcinomas in terms of their glandular size and appearance. As such, it is crucial for primary care providers to be able to recognize and appropriately manage these lesions.

Keywords: *Parotid gland swelling, primary care, salivary gland neoplasm, Warthin tumour.*

Introduction

Warthin tumours (WT), also known as papillary cystadenomas, are a type of benign tumour that commonly arises in the parotid gland, the largest of the salivary glands.[1] Synonyms for WT are adenolymphoma, cystadenolymphoma and papillary cystadenoma lymphomatosum. These tumours are characterized by a papillary or adenomatous proliferation of oncocytic epithelial cells, accompanied by a prominent lymphoid stroma. Parotid swelling can have a variety of aetiologies, ranging from benign to malignant conditions.[2] A careful assessment of the patient's symptoms, physical examination findings, and any underlying medical conditions is essential in guiding the diagnostic and management plan. A multidisciplinary approach involving primary care, otolaryngology, and radiology is recommended to ensure a comprehensive evaluation and appropriate management. Clinicians should perform a thorough history and physical examination, assessing the location, size, consistency, and any associated symptoms. Imaging studies, such as CT or MRI, may be ordered to further characterize the lesion and guide the need for biopsy or surgical intervention. [3,4]

Case report

In this case report, we present a 46-year-old male who was a heavy smoker with more than 40 pack-years, and no other co-morbidities and presented to his primary care physician with a gradually enlarging, painless swelling of the left side of his face. The patient first noticed the swelling about 5 years prior but had refrained from seeking medical attention, as he was concerned that the mass could potentially be indicative of a malignant process. He denied a history of trauma to the area, fever, loss of appetite or weight loss and there was no family history of malignancy. On physical examination, a firm, non-tender, mobile mass sized about 6 x 5 cm in diameter was palpated in the left parotid region. There was no palpable lymphadenopathy or any other concerning findings. Given the patient's age and presentation, the primary care provider considered the differential diagnosis of Warthin tumour, pleomorphic adenoma, and salivary gland carcinoma[5,6]

The physician counselled the patient on the importance of further evaluation and possible surgical treatment to remove the mass. The patient was hesitant at first, as he was concerned about potential complications and the impact on his appearance. Recognizing the patient's apprehension, the physician took the time to thoroughly discuss the diagnostic process, which would likely involve imaging studies such as an ultrasound or CT scan to further characterize the mass, and a biopsy to confirm the diagnosis. The physician acknowledged the patient's cosmetic concerns and emphasized that modern surgical techniques have advanced significantly, often allowing for the removal of parotid gland tumours with minimal visible scarring and preservation of the patient's natural facial appearance. After carefully weighing the risks and benefits, the patient agreed to proceed with the recommended evaluation.

The mass was subsequently evaluated with a fine-needle aspiration (FNA) biopsy, which revealed a smear showing a few small cohesive sheets of oncocytes displaying abundant granular cytoplasm, central round nucleus with prominent nucleolus with numerous lymphocytes and granular debris in the background (Figure 1 & 2). However, no atypical cells or malignant cells were seen. The fine-needle aspiration of the left parotid swelling is consistent with the diagnosis of Warthin tumour. Given the benign nature of the tumour, the patient was referred to a head and neck surgeon for surgical excision. A CT scan of the neck was done as a preoperative assessment with the finding of a large left parotid solid cystic mass arising from the lower pole of the superficial lobe of left parotid gland measuring about 5.4 x 6.1 x 9.1 cm (AP x W x CC) (Figure 3 & 4). The patient opted for surgical excision, and the mass was successfully removed without complication. Histopathological analysis confirmed the diagnosis of Warthin tumour. During the

subsequent follow-up visits, the patient's surgical site healed well, and he reported no significant postoperative complications.

Discussion

In the context of primary care, the evaluation and management of Warthin tumour (WT) present unique considerations, as early detection and appropriate referral can significantly impact the patient's clinical trajectory. Warthin tumour, a relatively uncommon yet benign neoplastic growth, is characterized by its propensity to develop within the salivary glands, with a notable tendency to primarily affect the parotid gland. In this case report, we delve into the nuances of Warthin tumour, exploring its prevalence, clinical presentation, and the primary care approach of diagnosing and management. Additionally, we provide a comparative overview of Warthin tumour and other common salivary gland tumours mentioned in the Table 1.

Warthin tumour (WT) typically appears as a painless, slow-growing, round or oval mass that is well-circumscribed and usually located in the lower pole of the parotid gland, though it can occasionally present as a fluctuant swelling. The tumour's borders may become indistinct, often due to secondary inflammation. Tumour sizes generally range from 2 to 4 cm, but larger tumours up to 12 cm have been reported. The average duration of symptoms is about 21 months, with pain occurring in approximately 9% of patients. Other symptoms can include earache, tinnitus, and deafness, while facial paralysis is uncommon. When pain or facial paralysis does occur, it is often linked to the metaplastic variant of WT or secondary inflammation and fibrosis. There is a strong association between WT and cigarette smoking, with smokers being about eight times more likely to develop WT than non-smokers. Other contributing factors may include radiation exposure and autoimmune disorders. WT typically affects elderly individuals, most commonly in their 50s and 60s, with an average age of 62 years. It is rarely seen in individuals under 40. WT occurs in both Caucasians and Asians, but it is very rare in African Americans and Black Africans. The condition also shows a male predominance, with a male-to-female ratio of 2.3:1. [1][2]

Recognizing the need for a comprehensive evaluation and the likelihood of a Warthin tumour, the primary care physician promptly referred the patient to an otolaryngologist, who could provide the necessary diagnostic workup, including imaging studies, and form an appropriate treatment plan. Fine-needle aspiration cytology (FNAC) had a high diagnostic accuracy in the diagnosis of Warthin tumour, with a sensitivity of 93%, while the specificity was 94.8% and the accuracy, of 94.6% [6][7]. The primary care physician's recognition of the characteristic clinical presentation, combined with the confirmation of the diagnosis through appropriate testing, is critical in guiding the patient towards the most suitable management approach.

The multifocal nature of Warthin tumours and their tendency to recur after incomplete surgical removal underscores the critical importance of a thorough preoperative assessment and the selection of an appropriate surgical approach to optimize treatment outcomes and minimize the risk of potential recurrence in the future [8]. Careful follow-up is also essential, as the literature has reported cases of malignant transformation and the development of cervical lymph node metastases in some instances.[6][7]

In the case of the patient presented, the otolaryngologist performed a complete superficial parotidectomy, which is the recommended surgical intervention for Warthin tumours, as it allows for the complete excision of the affected gland and reduces the likelihood of recurrence [9].

The primary care physician's role in the management of Warthin tumour extends beyond the initial diagnosis, as they are responsible for coordinating the patient's care, providing ongoing support, and monitoring for any potential complications or recurrence during the follow-up period. This case demonstrates the pivotal role of

the primary care physician in recognizing uncommon salivary gland pathologies, effectively communicating the diagnostic and treatment plan to the patient, and coordinating timely referral to the appropriate specialist even in the setting of patient anxiety and delayed presentation to ensure appropriate diagnosis and treatment.[10]

Conclusion

Prompt recognition and appropriate management of parotid swelling are crucial to avoid complications and ensure the best possible patient outcomes. The primary care provider's role in this process is essential, as they are often the first point of contact for patients with this condition. By working collaboratively with specialists, the primary care provider can ensure a comprehensive and effective approach to managing parotid swelling. By maintaining a high index of suspicion for Warthin tumour in patients presenting with a painless parotid mass, primary care providers can facilitate early detection and timely referral to the appropriate specialists, ultimately improving patient outcomes and quality of life.

Conflict of Interest

There was no conflict of interest.

Source of financial/funding

None

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Authors contribution

All authors contributed to the drafting of the manuscript, data collection, analysis and editing the manuscript.

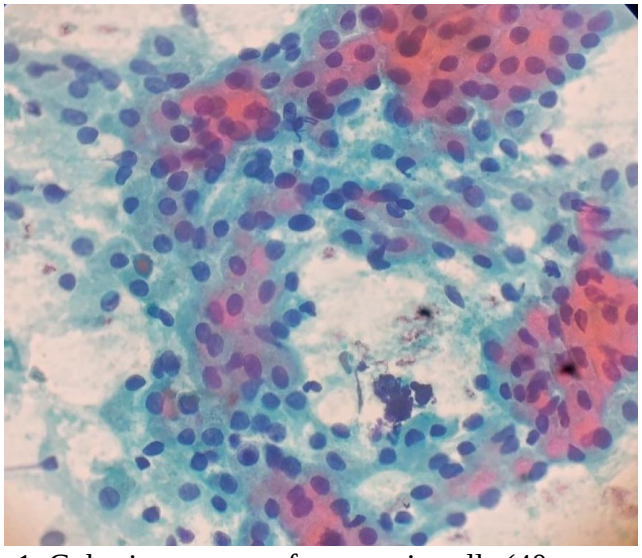

Figure 1. Cohesive groups of oncocytic cells (40x magnification)

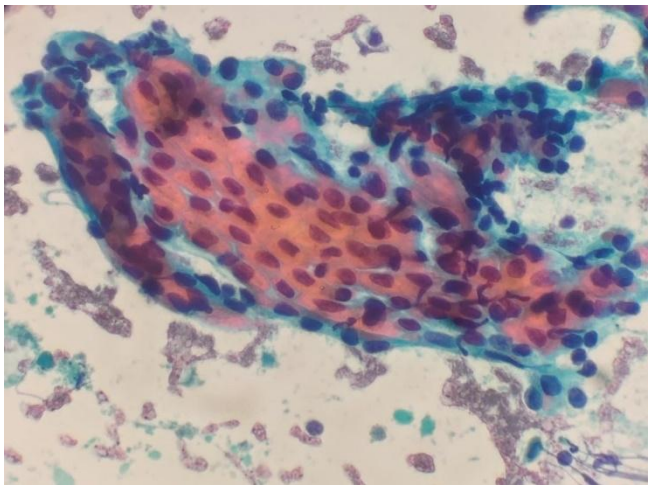

Figure 2. Groups of oncocytic cells with lymphocytes in the background (40x magnification)

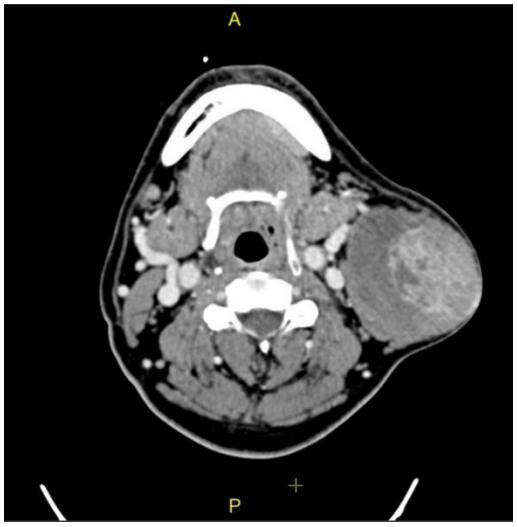

Figure 3. CT scan of the neck with contrast of the patient demonstrating large left parotid solid cystic mass in axial view

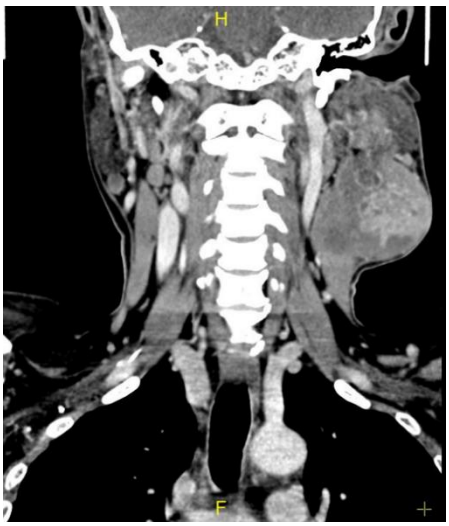

Figure 4. CT scan of the neck with contrast of the patient demonstrating large left parotid solid cystic mass in coronal view

Table 1. This table provides a comparative overview of the key features of Warthin's tumour and other common salivary gland tumours. [1,2,5,6]

Feature	**Warthin's Tumour**	**Pleomorphic Adenomas**	**Mucoepidermoid Carcinoma**	**Adenoid Cystic Carcinoma**
Prevalence	15%, second most common benign salivary gland tumour	45% - 70%, most common benign salivary gland tumour	30%, most common malignant salivary gland tumour	10%, second most common malignant salivary gland tumour
Nature	Benign	Benign	Malignant	Malignant
Location	Primarily parotid gland	Primarily parotid gland, can occur in other glands	Parotid gland, minor salivary glands	Parotid gland, minor salivary glands
Gender Predilection	Male predominance	Equal in males & females	Slightly female predominance	Equal in males & females
Symptoms	+ Slow-growing mass + Painless	+ Slow-growing mass + Painless ± Facial nerve involvement (if the size is large/undergoes malignant change)	+Rapid growth +Painful +Facial nerve involvement	+Slow-growing mass +Painful +Facial nerve involvement
Histology	Cystic spaces, lymphoid stroma, oncocytic epithelium	Mixed epithelial and myoepithelial cells with stromal component	Mix of mucous, intermediate, and epidermoid cells	Cribriform, tubular, solid patterns
Treatment	Surgical excision	Surgical excision	Surgical excision, possible adjunct therapy (radiation/chemotherapy)	Surgical excision, radiation therapy
Prognosis	Excellent	Excellent	Variable, depends on grade and stage	Guarded, with frequent recurrences and potential distant metastasis

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