

**WARTHIN'S TUMOUR: CYTOLOGICAL AND HISTOLOGICAL FEATURES : A CASE REPORT****Dr. Sri Hansini M. B.<sup>\*1</sup>, Dr. Mukilarasi K. R.<sup>2</sup>, Dr. P. Karkuzhali<sup>3</sup>, Dr. Hemalatha Ganapathy<sup>4</sup>**<sup>1,2</sup>Postgraduate, Department of Pathology, Sree Balji Medical College and Hospital, Chrompet, Chennai, Tamil Nadu.<sup>3</sup>Professor and HOD, Department of Pathology, Sree Balji Medical College and Hospital, Chrompet, Chennai, Tamil Nadu.<sup>4</sup>Professor, Department of Pathology, Sree Balji Medical College and Hospital, Chrompet, Chennai, Tamil Nadu.**\*Corresponding Author: Dr. Sri Hansini M. B.**

Postgraduate, Department of Pathology, Sree Balji Medical College and Hospital, Chrompet, Chennai, Tamil Nadu.

Article Received on 01/10/2017

Article Revised on 22/10/2017

Article Accepted on 12/11/2017

**ABSTRACT**

Warthin's tumour/Papillary cystadenoma lymphomatosum (PCL) constitutes a minority of salivary gland neoplasms and it is a monomorphic adenoma which primarily involves the parotid gland. Warthin's tumour shows multiple cysts that have numerous papillations covered by bilayered columnar and basaloid oncocytic epithelium. The connective tissue portion shows proliferation of follicle- containing lymphoid tissue which necessitates careful distinction for diagnosis. Although, Warthin's tumour presents as a clinically benign, slow-growing, usually asymptomatic lesion with low rates of recurrences and malignant transformation, but still this tumour is considered unique because of its histological appearance and unknown origin and pathogenesis. Here, we report a case of Warthin's tumour of eighteen years duration in a 58-year-old male patient in the left parotid gland and also review and discuss various concepts concerning the development of this tumour along with a comprehensive literature on its cyto-pathologic and histo-pathologic features.

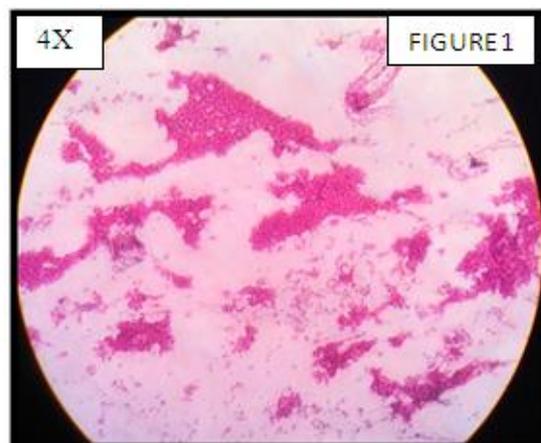
**KEYWORDS:** Warthin's tumour/Papillary cystadenoma lymphomatosum (PCL).**CASE REPORT**

A 58-year-old male patient attended the outpatient unit of Sree Balaji Medical College and Hospital, Chennai, India, presenting with a painless swelling on the left lower side of the face since eighteen years. It was insidious in onset and pea sized, gradually increased to its present size. There was no history of pain, bleeding, trismus, parathesia or discharge from swelling during the course of enlargement. No history of fever or altered salivary flow. His medical history was noncontributory. Patient's family history was negative regarding similar complaints.

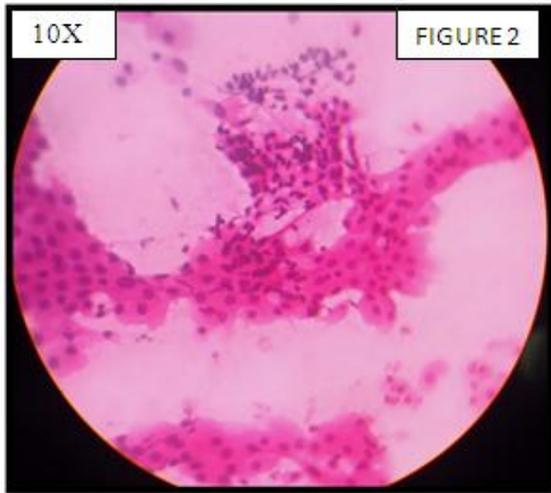
Extra-oral examination revealed a large, localized roughly oval swelling in the left preauricular region measuring about 7 x 3 cm, warm. The overlying skin appeared normal with no evidence of scar, sinus, discoloration or punctum. On palpation, the swelling was soft and fluctuant. Skin over the swelling was mobile and pinchable. The right ear lobe was slightly raised and lymph nodes were not palpable.

Based on the history and clinical examination, a provisional diagnosis of benign tumour, of salivary gland origin, was made.

**Fine needle aspiration cytology (FNAC)** and biopsy was advised for further evaluation. The aspirate yielded blood tinged pus material - 9 ml and the smear studied showed syncytial sheets of oncocytic cells admixed with lymphocytes in a serofibrinous background. The microscopic features suggested the possibility of Warthin's tumour.



**Figure 1: Showing oncocytic cells admixed with lymphocytes in a serofibrinous background.**



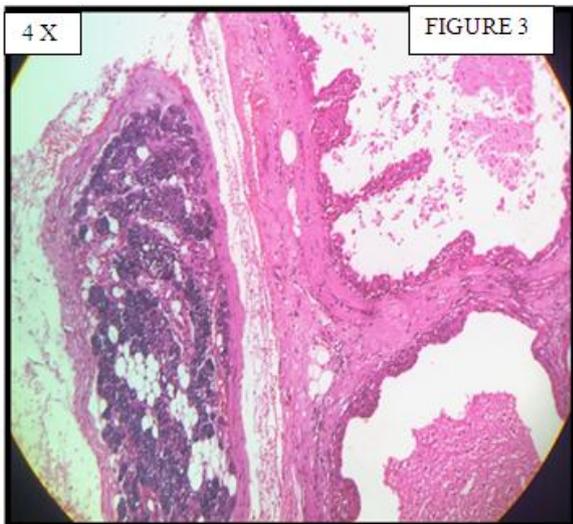
**Figure 2: Showing clusters of oncocytic cells with lymphocytic background.**

Finally, under all aseptic conditions, superficial parotidectomy was done and the specimen was sent for histopathological examination to confirm the diagnosis. The patient's recovery was uneventful.

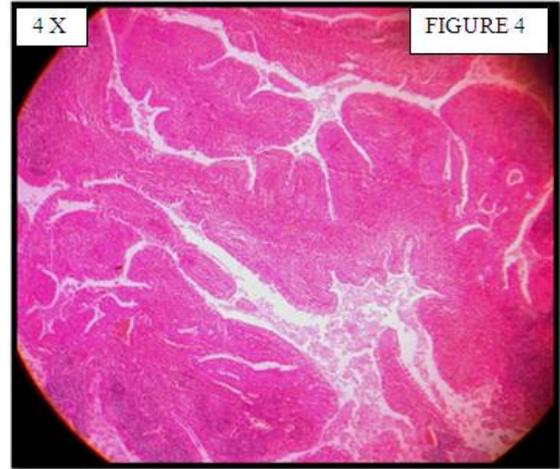
**Histopathological examination:** The excised mass was brown to dark brown in colour, spherical to ovoid in shape and measured 6x5x2.5 cm in diameter. The mass was encapsulated, lobular and fluctuant. The cut surface showed Greyish brown with whitish area containing multiple tiny cysts.

The microscopic examination revealed a neoplasm composed of cystic spaces with papillary formations lined by oncocytic cells and basal cells. Papillary core showed lymphocytes and plasma cells.

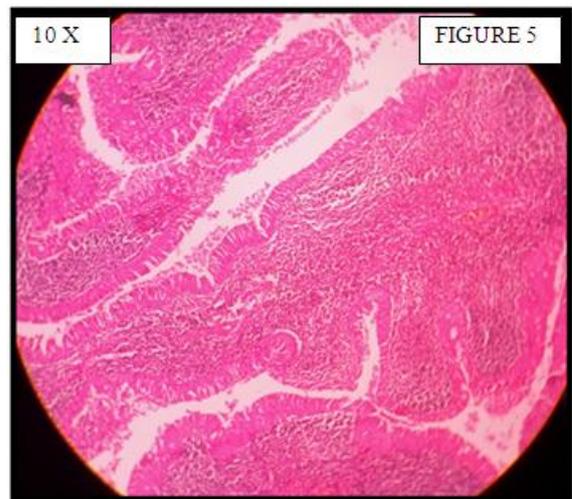
**MICROSCOPIC PICTURES**



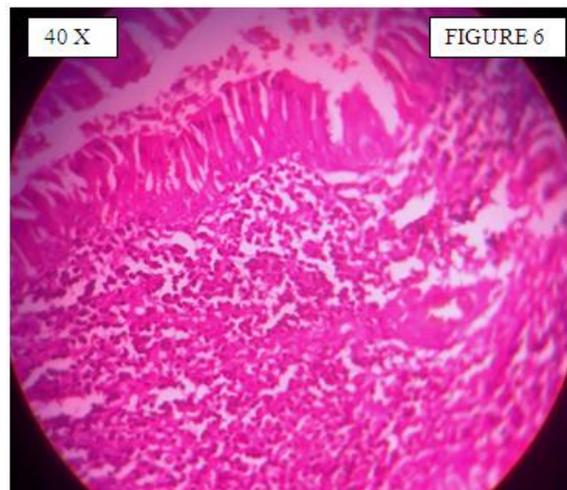
**Figure 3: Showing normal salivary gland and neoplasm with cystic spaces.**



**Figure 4: Showing neoplasm composed of cysts with papillary formations.**



**Figure 5: Showing papillary processes lined by double layered oncocytic cells and basal cells.**



**Figure 6: Showing bilayered epithelium enclosing lymphocytes.**

## DISCUSSION

**History:** Warthin's tumour was first reported by Hildebrand in 1895 as a form of lateral cervical cyst variant. Albrechet and Artz, in 1910, termed this tumour as papillary cystadenoma. In 1929, Aldred Scott Warthin's published two cases and called it as Papillary cystadenoma lymphomatosum (PCL). The term 'Warthin's tumour' was first applied in 1944 by Martin and Ehrlich in respect to Warthin's and since then the term 'Warthin's tumour' has been extensively used.

**Epidemiology:** Warthin's tumor/papillary cystadenoma lymphomatosum/adenolymphoma, is the second most frequent benign tumor arising in the parotid. It is almost exclusively limited to the parotid gland and its extra-parotid locations are considered to be very rare. There is an apparent male predilection for its occurrence<sup>[1]</sup> and is the only benign neoplasm of salivary gland associated with smoking.<sup>[2]</sup> Rarely, either the epithelial or lymphoid component of Warthin tumor can undergo malignant transformation, with an estimated incidence of less than 0.1 %. The most common carcinomas are squamous cell carcinoma, oncocytic carcinoma, adenocarcinoma, undifferentiated carcinoma, mucoepidermoid carcinoma and Merkel Cell Carcinoma.

**Clinical Features:** Warthin's tumor presents as a nodular painless swelling which is slow growing, and firm to fluctuant on palpation. It can be unilateral, bilateral or multi-centric and is asymptomatic in 90% of cases.<sup>[4,5,6]</sup> The patient in our case reported a slow growing tumour of eighteen year duration.

**Pathogenesis:** Numerous theories have been proposed regarding histogenesis of Warthin's tumor. Initially Hildebrand proposed that the lesion may be a variant of lateral cervical cyst and remnants of the branchial pouches. Warthin<sup>[3]</sup> in 1929 had suggested that PCL arose from heterotrophic pharyngeal endoderm. Some authors also suggested that Epstein Barr Virus (EBV) may play an important role in the pathogenesis of Warthin's tumour.

**Treatment and Prognosis:** The treatment of Warthin's tumour is surgical removal. Some surgeons prefer local resection with surrounding tissue; others chose the superficial parotidectomy in order to avoid the rupture of tumour capsule.<sup>[6]</sup>

## CONCLUSION

The current report presents the case of painless swelling of parotid gland in a 58-year male. The tumour had slowly and asymptotically grown in eighteen years duration and was situated in characteristic area of Warthin's tumour. History, clinical examination and other investigations were suggestive of benign salivary gland lesion. The final diagnosis was achieved only after the cytological and histopathological examinations guiding us the treatment plan. Though the lesion is

common, a more number of incidences will help dentist and even general physicians to understand the pathology of Warthin's tumour.

## REFERENCES

1. Fanatasia JE, Miller AS. Papillary cystadenoma lymphomatosum arising in minor salivary glands. *Oral Surgery Oral Medicine Oral Pathology*, 1981; 52: 411–16. [PubMed].
2. Kotwall CA. Smoking as an etiologic factor in the development of Warthin's's tumour of the parotid gland. *American Journal of Surgery*, 1992; 164: 646–47. [PubMed].
3. Ellis GL, Auclair PL. *Surgical Pathology of salivary glands*. Philadelphia: W.B. Saunders Company Ltd, 1991; 187–201.
4. Lamela J, Terry JH, Alfonso AE. Warthin's's tumour: multicentricity and increasing incidence in women. *American Journal of Surgery*, 1987; 154: 347–51. [PubMed].
5. Aguirre JM, Echebarria MA, Martinez-Conde R, Rodriguez C, Burgos JJ, Riveria Jm. Warthin's tumour. A new hypothesis concerning its development. *Oral Surgery Oral Medicine Oral Pathology*, 1998; 85: 60–63. [PubMed].
6. Barners L, Eveson JW, Reichart P, Sidransky D. *Pathology and genetics, head and neck tumours*. Lyon: IARC Press. World health organization classification of tumours, 2005; 209–81.