

## Clinical and Morphological Aspects of Warthin's Tumor

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**ABSTRACT** The study includes 16 cases of Warthin's tumor in a period of 4 years (2004-2008). The tumors were diagnosed at patients of VII decade, most of them smoker. The studies of Warthin's tumor macroscopic morphological parameters allow us to establish the localization exclusive at parotid glands like solitary tumor and the tumoral volume oscillate mostly between 2-4 cm in diameter. Histopathologically we notice the prevalence of typical tumor forms, with balanced rapport epithelium / stroma. In this study we have found in 10 cases typical forms, in 4 cases the prevalence of epithelium component and in 2 cases the prevalence of stroma component.

**KEY WORDS** Warthin's tumor, salivary gland, tumoral pattern, stroma

### Introduction

Tumoral pathology of salivary glands has an important place in OMF pathology, by greater frequency at this lesions and also invader potential, especially of neoplastic malignant lesions.

In our country after various statistic it fined that from 10 000 tumor with oral and maxillo-facial localization the salivary glands was affected in rate of 18,62%. The most frequent are benign tumor of salivary glands, the incidence vary between 54-79%, from which Warthin's tumor having 3,5-12% rate from epithelial neoplastic tumors; 5,3% from parotid tumors and 10,4% from benign tumors with parotid localization.

It was established that, excepting pleomorphic adenoma, this type of tumor is more frequent than salivary adenoma (no less than 3 times) (5).

### Material and Methods

Our study was realized by analysis of 16 cases with Warthin's tumor diagnosis, observed 4 years period (2004-2008).

The material used was represented by clinical observation and medical records and card -index of surgical exeresis pieces and also the Warthin's tumors casuistry of the Pathology Lab of the Emergency County Hospital of Craiova.

The surgical exeresis pieces proceed from patients of OMF Surgical Clinic, was fixed in tamponade formol 10% and processed by common

histopathological technique, paraffin embedding and Hematoxylin-Eosine stain.

### Results

This study was made on 16 case which represents 7,2% from OMF tumor pathology in 4 years period. First, we was interested by epidemiological dates, like the age, sex and also risk factors.

From results we observed the predominance cases of Warthin's tumor at patients from VII decades (40%), this type of tumor being specific to older adults. The distribution of neoplasias on sex has indicated the predominance of this type of tumor at male sex (67%), with a report M:F = 1,9:1. By point o view topographic the examined tumor was develop exclusive at parotid gland level.

By etiological correlation with cigarette smoking, we have found a grater incidence of tumors at smokers.

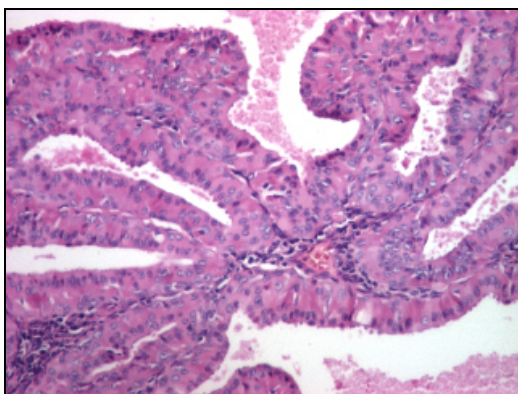
Macroscopic aspect of investigated Warthin's tumor was like a isolated tumor mass, with medium size between 2-4 cm. In 14 cases from examined cases the tumor was well demarcate and just in 2 cases was presented irregular limits because of secondary inflammation. On section area the aspect was polycystic, with variable size cysts, of which content was with brown, mucoid and clear aspect. The cysts with big size were also

presented few intraluminal papillary excrescences. Intercystic areas has a white-like solid aspect and occasional we have remarked the presence of little hemorrhagic areas.



**Fig. 1 : Macroscopic aspect of Warthin's tumor**

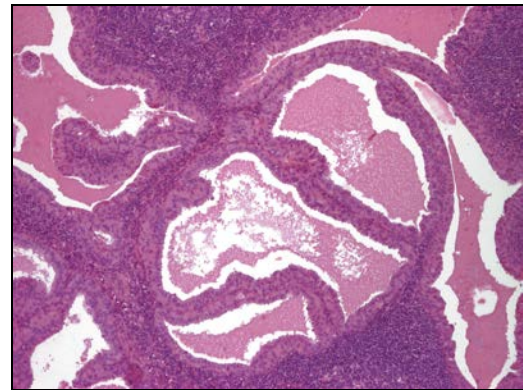
Histopathological, developed pattern of the tumors was cystic. We have observed the presence of many cysts which are lining by bistratified epithelium , with intraluminal papillary excrescences , constituted from oncocytar , basal and columnar cells, contiguous with lymphomatous stroma. The oncocytic cells was high columnar type, with cytoplasmatic limits good demarked, cytoplasm granulated fine, eosinophils and light hyperchromatic nucleus, palisade placed in center of cells or luminal pole. They were placed in continuous stratum which demarked luminal cystic proliferations. Basal cells has small size, small and circular or oval form nucleus with little, evident nucleolus. They are presented through or under columnar oncocytic cells.



**Fig.2:Bistratified epithelium constituted from oncocytic cells.Ob. x100, HE stain;**

Bistratified epithelium has formed papillary excrescences with varying forms and sizes, at intraluminal cystic, realized papilar-cystic aspect. The axis of this papillary excrescences was

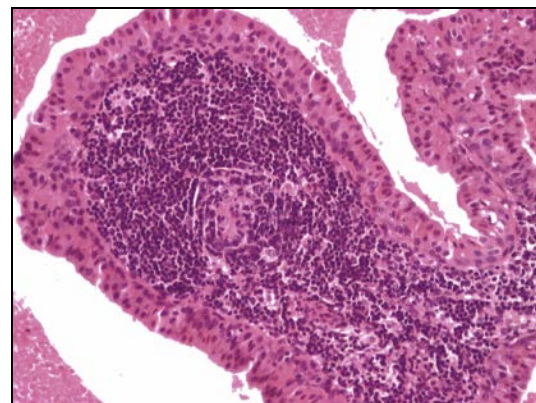
fibrovascular type which are frequently hide of compact lymphocytic infiltrate.



**Fig.3:Cystic-papillary tumoral aspect and bistratified epithelium presence, Ob. x100, HE stain;**

In 3 cases at epithelial component level we remarked mucinosus metaplasia areas and squamous metaplasia in a single case.

Stroma quantity was various at different cases. So, in 4 cases, stroma was very poorsmall ( less 1/3 from tumor volume), represents by a connective lax tissue infiltrate with a few lymphocytes. In 2 cases, stroma was abundant ( over 2/3 from tumor volume) and has a pure lymphomatous character, diffuse strew with many components which have germinal center and follicular stratum good represented. In 10 cases epithelial component/stroma component was balanced, stroma with diffuse lymphomatous character has presented rarely a few lymphoid follicular components with obvious germinal centers.



**Fig.4:Lymphoid follicle with germinal center in tumoral stroma.Ob.x100, HE stain;**

## Discussion

Our study about 16 cases with Warthin's tumor indicated the presence of neoplasms in 18% from all tumors of salivary glands in mentioned period. In other researches , the incidence of Warthin's tumor vary between 3,5-12% from all tumors of

salivary glands and 4-11% from all benign tumors of parotid (1,7).

Statistical analysis on age groups emphasize the disease diagnosis at patients in IV-VIII decades, having the greater incidence at VII decades. About sex distribution, we observed that tumors are developed most at male patients (67%). Similar dates from specialization literature indicate the presence of tumor between 40 and 70 years, the men being more affected than women (for 5 times) (2). Other studies show a report M:F =12:1 in 1987, and in 1966 the report was 1,2:1 from male patients. The apparent decrease of tumor incidence at male patients can be due etiological role at cigarette smoking in her developed (5). In the last years was observed that the increasing incidence of Warthin's tumor at female patients has a simultaneous evolution with increase of exposed at cigarette smoking.(11,13).

The analysis of topographical distribution emphasized the appearance of taking consideration tumors only at parotid glands level. The specialization literature showed that almost all cases grow in parotid glands or periparotid areas, Warthin's tumor representing 5,3% from all parotid tumors.

About ethiopathogenic correlation it established that 71% were cigarette smoking persons. Similar dates from specialization literature indicate that at cigarette smoking persons risk to developed a that tumor is 8 times more grater than non-smokers (8).

In that 16 Warthin's tumor researched, macroscopic aspect was like a isolated tumoral mass, with medium sizes vary between 2-4 cm, in most cases with a well demarcates and which on section area appears polycystic. This results are the same with specialization literature. It's important the fact that at almost 12% from patients with that kind of tumor it emphasized synchronous or metachronous polycentric tumors uni or bilateral (3,9). On the whole it established that Warthin's tumor are bilateral in 5-7,5 % of patients (4,10).

Histopathological study showed the abundance of tumors typical forms, with balanced report epithelium/stroma. In this study we have found in 10 cases typical forms, in 4 cases the prevalence of epithelium component and in 2 cases the prevalence of stroma component. In 1996 Parham DM has classified the tumors by this subclass, indicated in 77% cases tumors typical forms, in 14% cases the prevalence of epithelium component and in 8% cases the prevalence of stroma component(12). Also the autors sustain

that subclass of Warthin's tumor doesn't have prognosis value.

With some exceptions the tumors don't create diagnosis problems. Some times, in the presence of the necrosis, inflammation and hemorrhage areas or the presence of metaplasia on epithelium component ( mucinous, squamate) is necessary the differentiation from papilar oncocytic carcinoma. In this cases, the absence of atypia or neoplastic infiltration exclude malignant tumors. In case the prevalence of stroma component can lead to confusions with malignant lymphoid proliferation. Therefore, the distinguished on serial sections of bistratified epithelium formed from basaloid and oncocytic cells can indicated a benign tumor.

## Conclusions

Warthin's tumor is the most frequent benign neoplasm of parotid gland after pleomorphous adenoma. It is diagnosed especially at VII decades men, in over 3/4 from cigarette smokers. Histopathological, this type of tumor in general create the diagnosis problems. Some times in presence of epithelium component prevalence, especially associated with various form of metaplasia or the prevalence of stroma component Warthin's tumor must be differentiate of other benign or malignant lesions with the same structure.

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