



Content available at: <https://www.ipinnovative.com/open-access-journals>

Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology

Journal homepage: [www.joooo.org](http://www.joooo.org)



## Original Research Article

# Warthin's tumours of the salivary glands: Socio-demographic profile, clinical and histological diagnosis at the Donka university hospital of Conakry

**Bah Amadou Tidiane<sup>1\*</sup>**, Sylla Abdoulaye<sup>2</sup>, Balamou Adolphe<sup>3</sup>, Camara Alhassane Alpha<sup>4</sup>, Bah Amar<sup>1</sup>, Seck Khadim<sup>5</sup>

<sup>1</sup>Dept. of Odonto-Stomatology and Maxillofacial Surgery, Donka University Hospital Center, Conakry, Guinea

<sup>2</sup>Dept. of Pathological Anatomy and Cytology, Donka University Hospital Center, Conakry, Guinea

<sup>3</sup>Dept. of Dentistry, Faculty of Health Sciences and Techniques, Gamal Abdel Nasser University of Conakry, Guinea

<sup>4</sup>Dept. of Odonto-Stomatology, Ignace Deen National Hospital, Conakry, Guinea

<sup>5</sup>Dept. of Dentistry and Stomatology, Cheikh Anta Diop University of Dakar, Senegal

## Abstract

**Introduction:** Warthin's tumours of the salivary glands are rare but not exceptional benign tumours, characterized by their dual epithelial and lymphoid differentiation. The aim of this study was to contribute to the study of Warthin's tumours of the salivary glands

**Methods:** This was a retrospective, descriptive study that covered a 10-year period from January 1, 2011 to December 31, 2020.

**Results:** In 10 years, we diagnosed 27 salivary gland tumours, i.e., 9.61% compared to other salivary gland tumours. The age group of 43-52 years old was the most affected, including 8 cases, or 29.63%. The mean age of the patients was 49.1 years, with the extremes of 23 and 75 years. The female sex was the most found, with 15 cases, or 55.56%. Masses or swelling were the main reasons for consultation 27 cases, or 100%. Non-composite Warthin's tumour accounted for 21 cases, or 77.78%. The sections in pathological areas represented 14 cases, or 51.85%.

**Conclusion:** Warthin's tumour is a benign tumour of the salivary glands with particularities characterized by their double differentiation and heterogeneous character.

**Keywords:** Tumours, Warthin, Glands, Salivary, Diagnosis, Clinical, Histological

**Received:** 20-12-2024; **Accepted:** 22-02-2025; **Available Online:** 03-04-2025

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

Warthin's tumours are tumours of the salivary glands with double glandular and lymphocytic differentiation, with benign anatomopathological characteristics.<sup>1</sup>

They represent rare benign tumours of the salivary glands, whose stroma is lymphoid. They have been found almost exclusively in the parotid gland and peri parotid lymph nodes.<sup>2</sup>

Their etiopathogenesis is not well known, but smoking and immune deficiency are often implicated. They are benign tumours and can undergo malignant degeneration.<sup>3</sup>

The rate of malignant degeneration was estimated to be between 2 and 5%. But the particularity of these benign tumours: lymphoid and epithelial is that both contingents, namely glandular and lymphoid, can degenerate one into carcinoma and the other into lymphoma.<sup>4</sup>

The problem of Warthin's tumours is diagnostic. The clinical examination can only assess the tumorous nature of the salivary glands, but cannot specify the Warthin character and the ultrasound can assess the heterogeneity of the salivary tumour. Cytopunctures for cytopathological analysis and biopsy for histological study are most often disappointing.<sup>1</sup>

The histopathological examination of the operative specimen is the essential time of diagnosis. It makes it

\*Corresponding author: Bah Amadou Tidiane  
Email: [bahtidianey@gmail.com](mailto:bahtidianey@gmail.com)

possible to specify the double differentiation of the tumour lesion and to eliminate the malignant degeneration of Warthin tumours.<sup>6</sup>

The objectives of this study were to:

1. Determine the socio-demographic profile of patients
2. To describe the anatomoclinical appearance of Warthin's tumours of the salivary glands
3. Identify the histological types of these tumours.

## 2. Materials and Methods

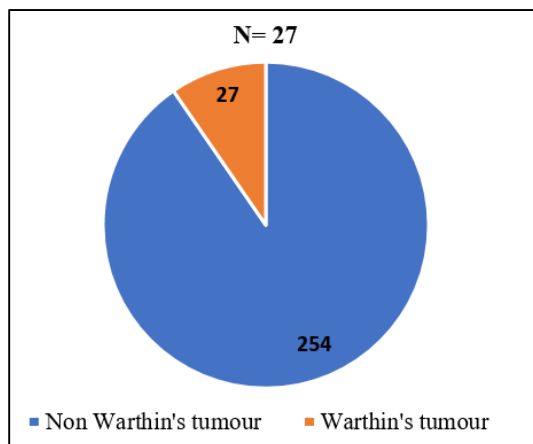
This was a retrospective descriptive study that covered a 10-year period from January 1, 2011 to December 31, 2020.

Frequency, age, sex, profession, reason for consultation, presumed diagnosis, capsular completeness, surgical section range, consistency, appearance, elementary lesion, heterologous lesion.

The histopathological examination report sheets received during the study period, mentioning biopsy or resection of the salivary glands, constituted our target population.

We included histopathological examination report sheets on which the diagnosis of Warthin's salivary gland tumours was retained.

## 3. Results

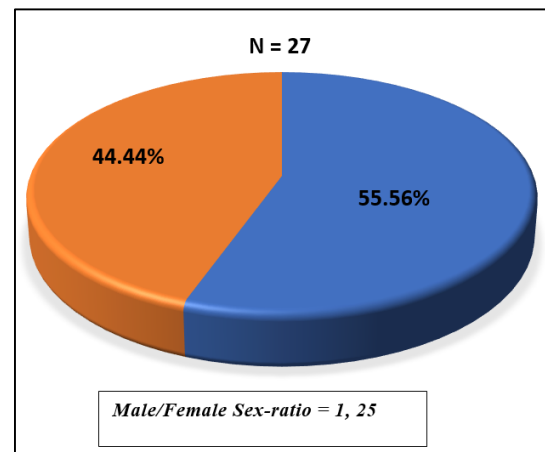


**Figure 1:** Frequency of Warthin's tumours

**Table 1:** Distribution of patients by age group

Age range (years)	Number	Percentage
23-32	03	11,11
33 -42	04	14, 81
43-52	08	29,63
53-62	06	22,22
63-72	04	14,82
73 and over	02	7,41
<b>Total</b>	<b>27</b>	<b>100</b>

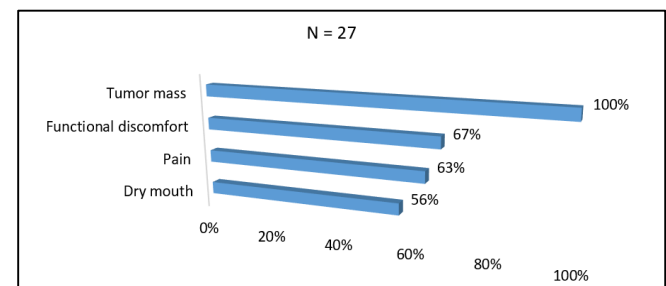
Average age = 49.1 years Extreme ages 23 years and 75 years.



**Figure 2:** Gender distribution of patients

**Table 2:** Distribution of patients according to socio-professional strata

Profession	Number of cases	Percentage
Housewives	09	33,33
Farmers	07	25,93
Liberals	05	18,52
Officials	03	11,11
Retirees	02	07,41
Pupils	01	03,70
<b>Total</b>	<b>27</b>	<b>100</b>



**Figure 3:** Distribution of patients according to the reasons for consultation

**Table 3:** Distribution of patients by clinical diagnosis

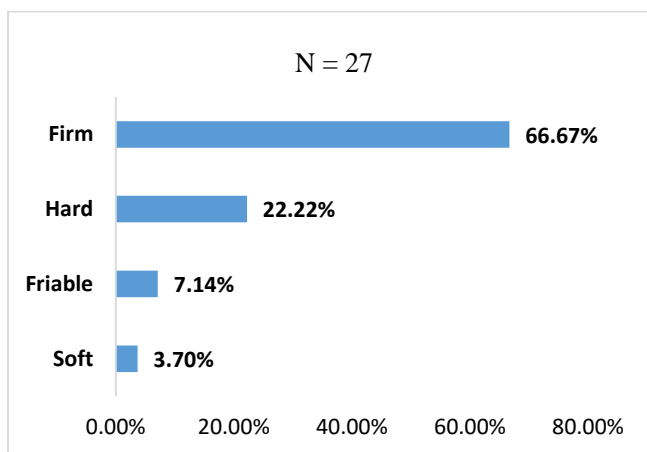
Presumptive clinical diagnosis	Number of cases	Percentage
Malignancy	12	44,44
Benign tumour	07	25,93
Undetermined tumour	06	22,22
Adenitis	02	07,40
<b>Total</b>	<b>27</b>	<b>100</b>

**Table 4:** Distribution of patients according to the capsular integrity of the tumour

Capsular integrity	Number of cases	Percentage
Fully Capsulated	16	59,26
Partially Capsulated	05	18,52
Uncapped	03	11,11
Undetermined	03	11,11
<b>Total</b>	<b>27</b>	<b>100</b>

**Table 5:** Distribution of cases by surgical section bands

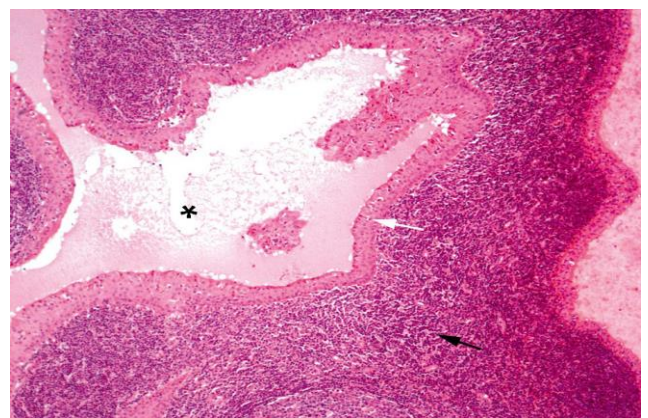
Surgical Section Slices	Number of cases	Percentage
Pathological area	14	51,85
Undetermined area	08	29,63
Healthy Zone	05	18,52
<b>Total</b>	<b>27</b>	<b>100</b>

**Figure 4:** Distribution of parts according to the consistency of the tumour mass**Table 6:** Distribution of the salivary tumour mass according to its appearance

Aspect	Number of cases	Percentage
Blue-greyish	12	44,44
Yellowish-Gis.	07	25,93
Greyish	05	18,52
Yellowish	03	11,11
<b>Total</b>	<b>27</b>	<b>100</b>

**Table 7:** Distribution of the salivary tumour mass according to the histological elementary lesion

Histological elementary lesions	Number of cases	Percentage
Non-composite Warthin tumour	21	77,78
Warthin's tumour + Chronic lymphocyte sialitis	03	11,11
Warthin's tumour + pleomorphic adenolymphoma	02	07,41
Warthin's Tumour + Myeloepithelial Adenoma	01	03,70
<b>Total</b>	<b>27</b>	<b>100</b>

**Figure 5:** Histological representation of Warthin tumour of the salivary gland at 40x. Microscopy: cystic cavity (\*) bordered by papillae with a double cell base (oncocytes + basal cells) (white arrow) resting on a very abundant lymphoid stroma (black arrow).

#### 4. Discussion

This result showed the rarity of Warthin's tumours compared to all tumours of the salivary glands. This rate is not negligible because Warthin's tumours are benign tumour lesions of a rare dystrophic nature, which can be complicated by malignant tumours. Our results were superior to Mnejja M et al.<sup>7</sup> who reported in their study that, Warthin's tumours accounted for 9.3% of other salivary gland tumours and 12.2% of benign parotid tumours.

We noted that more than half of our patients were less than or equal to 52 years of age 15 patients, or 56.63%. The average age of our patients was below that of Mnejja M, et al.<sup>7</sup> who reported that the average age of their patients was 63 years and that the extreme ages were 52 and 73 years. They mentioned that all their patients, at the time of diagnosis, were over 40 years old. They cited authors such as Paris J, et al.<sup>8</sup> who have suggested that Warthin's tumours occur in the 5th and 6th decades. The disease is rare before the age of 40.

We observed in this study that female patients were the most affected, 15 cases or a rate of 55.56%. We thus noted a

sex ratio of 0.8. Our results are contrary to those of MNEJJA. M et al.<sup>7</sup> who found in their study of parotid Warthin tumours about 11 cases that, patients represented 10 men and one woman with a sex ratio of 0.1.

The predominance of housewives and farmers could be explained by their belonging to the socio-economic strata most represented in our study. And oral hygiene conditions are often precarious. This could promote the occurrence of oral and salivary lesions. Our results were close to those of Mnejja M et al.<sup>7</sup> who reported that, patients with low socioeconomic status were the most affected in their study. They accounted for 57.6% of the registered patients.

Our results were similar to those of Mnejja M, et al.<sup>7</sup> who found that swelling was the main reason for consultation. This swelling is often unilateral, painless of variable consistencies, the volume of which gradually increases. It was observed in 100% of cases, followed by pain 30%.

Our results were contrary to those of Marmary Y, et al.<sup>9</sup> who reported that, diagnoses of benign parotid tumour constituted 35%. The same authors reported that the signs and symptoms of Warthin's tumours are not pathognomonic. Our data was close to Everson JW, et al.<sup>10</sup> who reported in their study that, the diagnosis of malignant tumours that was most suggested in 37% of cases.

The rate found was lower than that of Mnejja M et al.<sup>7</sup> who reported in their series that surgical specimens were used for 71% of the sample examined.

They were partially encapsulated in 5 cases, i.e., 18.52% of cases. This observation showed that Warthin tumours of the salivary glands were generally encapsulated. Encapsulation is a criterion for a good prognosis.

Our data were significantly lower than those of Mnejja M, et al.<sup>7</sup> who reported that, Warthin's tumour of the salivary glands constitutes benign tumours of salivary glands that are usually encapsulated. The same authors reported in their study that 86% of these diagnosed tumours were fully encapsulated.

Consistency is not a very suggestive element of the behaviour of Warthin tumours of the salivary glands, because there are salivary malignant tumours that have firm consistencies.

Varied aspects were observed, but heterogeneous ones were the most observed, especially greyish-white aspects. Our results were similar to those of Cournac JM et al.<sup>3</sup> who reported in their study that, heterogeneous aspects were macroscopically the most observed, in their study, but yellowish-gray aspects were observed in 40% of cases. The same authors have reported that Warthin's tumours are benign tumours, whose aspects are heterogeneous because of their double differentiation which makes them confuse malignant tumours by microscopy.

Warthin's tumours of the salivary glands are polymorphic tumours that vary in their histological types. Our results were superior to those of Miki H et al.<sup>11</sup> who reported in their study that, Warthin's tumours of the non-composite salivary glands were the most diagnosed with a frequency rate of 71% compared to all Warthin tumour subtypes.

Warthin's tumours of the salivary glands resected in the pathological area represented the largest number of cases sampled 14 cases, or 51.85%. This observation showed that the majority of the cases resected were in a pathological area. Our results were contrary to those of Maiorano E, et al.<sup>12</sup> who reported in their study that the majority of the sample examined was resected in the healthy area 63% of cases.

The most observed were those without associated heterologous lesions 21 cases, or 77.78%.

We have observed in our series that heterologous lesions can be associated, but in variable proportions. Our results were similar to those of Maiorano E., et al.<sup>12</sup> who reported in their study that, these benign adenolymphomatous tumours were associated with calcifications in 5% of cases, fibrosis in 4% of cases.

## 5. Conclusion

Warthin's tumours are relatively rare. It is a pathology of the fifties and sixties. It is predominantly female and parotid localized. The diagnosis of Warthin's tumours is essentially based on anatomical and histological examination.

They are benign tumours, whose aspects are heterogeneous because of the double differentiation that makes them confuse with malignant tumours on microscopy.

Warthin's tumours of the salivary glands are polymorphic tumours that vary in their histological types.

## 6. Source of Funding

None.

## 7. Conflict of Interest

None.

## References

1. Szpirglas H, Guedj A, Auriol M, Charpentier YL. Pathologie des glandes salivaires. *Chir Orale Maxillofac.* 2001;14:1–13.
2. Bonfils P. Tumeurs des glandes salivaires. *EMC Oto Rhino Laryngologie.* 2007;22:1–18.
3. Cournac JM, Roméo E, Blade JS, Souraud JB, Gisserot O, de Jauréguiberry JP. Tumeur de Warthin: une heureuse surprise au cours d'un lymphome de Hodgkin. *La Revue de Méd Interne.* 2011;32:S117.
4. Minami M, Tanioka H, Oyama K, Itai Y, Eguchi M, Yoshikawa K, et al. Warthin tumor of the parotid gland: MR-pathologic correlation. *Am J Neuroradiol.* 1993;14(1):209–14.

5. Ikarashi F, Nakano Y, Nonomura N, Kawana M. Radiological findings of adenolymphoma (Warthin's tumor). *Auris Nasus Larynx*. 1997;24(4):405–9.
6. Teymoortash A, Krasnewicz Y, Werner JA. Clinical features of cystadenolymphoma (Warthin's tumor) of the parotid gland: a retrospective comparative study of 96 cases. *Oral Oncol*. 2006;42(6):569–73.
7. Mnejja M, Hammami B, Bougacha L, Chakroun A, Charfeddine I, Ghorbel A. La tumeur de warthin de la parotide: A propos de 11 cas. *J Tun ORL Chirurgie Cervico-Faciale*. 2012;28:28–31.
8. Paris J, Facon F, Chrestian MA, Giovanni A, Zanaret M. Approche diagnostique des tumeurs de Warthin: clinique, cytoponction et IRM. *J Laryngol, Otol Rhinol*. (1919). 2004;125(1):65–9.
9. Marmary Y, Gomori JM, Nitzan DW. Lymphoepithelial parotid cysts as presenting symptom of immunodeficiency virus infection: Clinical, sialographic, and magnetic resonance imaging findings. *J Oral Maxillofac Surg*. 1990;48(9):981–4.
10. Eveson JW, Auclair P, Gnepp DR, El-Naggar AK. Tumours of the salivary glands. In: Barnes L, Eveson JW, Reichart P, Sidransky D, editors. *Pathology and genetics head and neck tumours*. Lyon: IARC; 2005. p. 209–81
11. Hisatomi M, Asaumi JI, Konouchi H, Yanagi Y, Matsuzaki H, Kishi K. Assessment of dynamic MRI of Warthin's tumours arising as multiple lesions in the parotid glands. *Oral Oncol*. 2002;38(4):369–72.
12. Maiorano E, Muzio LL, Favia G, Piattelli A. Warthin's tumour: a study of 78 cases with emphasis on bilaterality, multifocality and association with other malignancies. *Oral Oncol*. 2002;38(1):35–40.

**Cite this article:** Bah AT, Sylla A, Balamou A, Camara AA, Bah A, Seck K. Warthin's tumours of the salivary glands: Socio-demographic profile, clinical and histological diagnosis at the Donka university hospital of Conakry. *J Oral Med Oral Surg Oral Pathol Oral Radiol*. 2025;11(1):10–14.