

# PSYCHIATRIC DISORDERS AS A RISK FACTOR FOR WARTHIN'S TUMOR

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## Summary

**Introduction.** Warthin's tumor is a benign neoplasm of the salivary glands also known as adenolymphoma or lymphomatous papillary cystadenoma. This tumor is most commonly observed between the fifth and seventh decades of life and occurs three times more frequently in men than in women. The etiology of tumors of salivary glands is not well studied.

Psychiatric disorders are relatively common in the general population in the well-developed European countries. Psychiatric patients have a higher risk of specific somatic illnesses, such as cardiovascular diseases and obesity. Despite numerous reports, the association of psychiatric disorders with the incidence of neoplasms still remains unclear.

**Aim.** The objective of this study was to assess the association of psychiatric disorders with Warthin's tumor.

**Material and methods.** In our study, we included 48 patients treated at the Department of Surgical Oncology of the Hospital of the Ministry of Internal Affairs and at the Warmia and Mazury Oncology Centre between the years 2009 and 2015. All the patients in the study group had a histopathological diagnosis of Warthin's tumor. In this study, the patients underwent psychiatric interview concerning previous or ongoing psychiatric disorders. A detailed history of previous stays in hospitals was also gathered. Information about currently and previously taken medications, as well as family history of psychiatric disorders and Warthin's tumor was collected. The statistical analysis was conducted with the STATISTICA 12 software.

**Results.** None of our patients with Warthin's tumor was or had been treated for psychiatric disease, neither did they visit a psychologist or psychiatrist. Thorough medical history indicated that none of the family members of the patients suffered from psychiatric disorders. The patients had never received and did not take psychiatric drugs. The interview with patients' close family confirmed these findings.

**Conclusions.** There were no patients suffering from psychiatric disorders in the group of patients with Warthin's tumor. The authors of the present study believe, on the basis of this analysis, that psychiatric disorders are not responsible for the formation of benign tumors of the parotid gland. However, they consider it appropriate to continue studies in other patients.

Keywords: Warthin's tumor, risk factor, etiology, psychiatric disorder

## INTRODUCTION

Approximately 80% of parotid tumors are benign neoplasms. Warthin's tumor consists up to 6% of all salivary gland neoplasms. It is a benign neoplasm of the salivary glands, also known as adenolymphoma or lymphomatous papillary cystadenoma. It was first reported in 1895 by doctor Hildebrand and described by doctor Warthin in 1929 (1, 2). Warthin's tumor is the second the most frequent neoplasm in the salivary gland (3). This tumor is observed between the 5<sup>th</sup> and 7<sup>th</sup> decade of life and occurs three times more frequently in men than in women (1-3). The etiology of tumors of salivary glands is not well studied.

Psychiatric disorders are relatively common in the general population in the well-developed European countries (4, 5). Psychiatric patients have a higher risk of specific somatic illnesses, such as cardiovascular diseases and obesity (6, 7). Despite numerous reports, the association of psychiatric disorders with the incidence of neoplasms still remains unclear.

The authors of this article are first in the world to attempt to examine the relationship between mental disorders and Warthin's tumor.

## AIM

The objective of this study was to assess the association between psychiatric disorders and Warthin's tumor.

## MATERIAL AND METHODS

In our study, we included 48 patients treated at the Department of Surgical Oncology of the Hospital of the Ministry of Internal Affairs and at the Warmia and Mazury Oncology Centre between the years 2009 and 2015. All of the patients in the study group had a histopathological diagnosis of Warthin's tumor.

In the study group, the youngest patient was 22 years old and the oldest was 88 years. Most participants were female (33 female patients vs. 15 male patients). The average age was higher among women (56.79 years old) compared to men (53.47 years old). Women exhibited stronger age diversity (32.1%) than men (20.9%). The Mann-Whitney test did not confirm significant differences between the age male and female patients ( $p > 0.05$ ).

The tumor size ranged from 20 to 57 millimeters. The average tumor size was bigger in women (25.30 millimeters) than in men (25.27 millimeters). Diversification in the tumor size was higher in women (43.2%) compared to men (20.8%). The Mann-Whitney test did not confirm the significant differences between the size of the tumor in the test men and women ( $p > 0.05$ ).

In this study, the patients underwent psychiatric interview concerning previous or ongoing psychiatric disorders. A detailed history of previous stays in hospitals was also gathered. Information about currently and previously taken medications, as well as family history of psychiatric disorders and Warthin's tumor was collected.

The statistical analysis was conducted with the STATISTICA 12 software.

## RESULTS

None of our patients with Warthin's tumor was or had been treated for psychiatric disease, neither did they visit a psychologist or psychiatrist. Thorough medical history indicated that none of the family members of the patients suffered from psychiatric disorders. Patients suffered from Warthin's tumor never received and do not take psychiatric drugs now. The patients had never received and did not take psychiatric drugs. The interview with patients' close family confirmed these findings.

## DISCUSSION

The etiology of Warthin's tumor is still unclear. Exposure to ionizing radiation is a well-established risk factor (8, 9). A strong association between tobacco use and Warthin's tumor has been established (10, 11). In heavy-smokers ( $\geq 20$  cigarettes a day according to the WHO definition), bilateral Warthin's tumor was observed more frequently than in non-smokers (12). Besides ionizing radiation and tobacco use, there are many theories of Warthin's tumor etiology, including hormonal, embryonal or infectious theory (13-15).

Despite numerous reports, the association between psychiatric disorders and cancer incidence still remains unclear. Some studies reported cancer incidence is higher, similar or lower in psychiatric patients than in general population (16-18). People with mental diseases are more likely to have poor diet, be less physically active and to smoke (19, 20). It has been hypothesized that people suffering from psychiatric disorders have worse access to public health-care (21).

It is important to note that in our analysis, there were no patients suffering from psychiatric disorders in the group of patients with Warthin's tumor. The authors of the present study believe, on the basis of this analysis, that psychiatric disorders are not responsible for the formation of benign tumors of the parotid gland. However, they consider it appropriate to continue studies in other patients.

The authors of this article do not find other studies discussing psychiatric disorders and the risk of developing Warthin's tumor. The authors of this article are aware that the group of patients was not large, but this is due to the low incidence of this tumor. It should also be noted that other studies of patients with Warthin's tumor were characterized by relatively small sample sizes (ranging from 17 to 160 patients) were characterized by limited statistical analysis. The authors of this study believe that there is need for larger multicenter studies that will explore the etiology of Warthin's tumor.

## CONCLUSIONS

1. The etiology of Warthin's tumor is still unclear.
2. In our study there were no patients suffering from psychiatric disorders in the group of patient with Warthin's tumor.

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**Conflict of interest**

None

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