ORAL SURGERY

Oral Surgery ISSN 1752-2471

CASE REPORT

# Collision Hodgkin lymphoma and Warthin tumour. Report of a case and review of the literature

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**Key words:**
collision tumour, Hodgkin lymphoma, Warthin tumour

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**Accepted:** 11 January 2010

doi:10.1111/j.1752-248X.2010.01066.x

## Abstract

Association between Warthin tumour (WT) and lymphoma is extremely uncommon and the latter are generally B-cell type non-Hodgkin lymphoma. We describe a case of collision of WT and Hodgkin's lymphoma (HL) of the parotid gland. A 60-year-old man complained of slow progressive swelling of the right parotid gland. The ultrasound (US) examination detected a well-defined, bilobated hypoechoic mass located in the anterior lobe of the parotid gland. A US-guided fine-needle cytology (FNC) was performed and a cytological diagnosis of WT was made. The histological sections revealed two nodules: the main one showed a classical WT and the smaller, adjacent to the WT and separated from the later by a fibrotic band, showed residual gland and lymphoid tissue with microscopic and phenotypic features of HL. This is the third report in the literature describing a collision of WT and HL, likely representing a simple coincidence rather than a possible association between the two entities.

## Introduction

Warthin's tumour (WT), also known as papillary cystoadenolymphoma, is a benign neoplasm of the salivary gland accounting for 3.5–10% of all primary epithelial tumours and involving more frequently the parotid gland[1]. The tumour consists of bilayer oncocytic glandular epithelium surrounded by lymphoid stroma, with a thin basement membrane separating the epithelial and lymphoid portions. The lymphoid stroma is mainly formed by small lymphocytes; in some cases it may form large ovoid follicles containing small cleaved cells and scattered, transformed, larger lymphocytes[1]. Combined WT and other types of primary tumours of the salivary glands are extremely unusual and make up less than 0.3% of salivary gland neoplasms[2]. The most common combination reported is WT and pleomorphic adenoma[3], whereas associations with oncocytoma[4], mucoepidermoid carcinoma[5] and undifferentiated carcinomas[6] have also been reported. In addition to different synchronous neoplasms, few cases of metastasis in WT from epithelial tumours have also been reported[7].

The association of WT with lymphoproliferative processes is definitively less frequent[8]; in this case, lymphoid stroma of WT was infiltrated by disseminated non-Hodgkin lymphoma (NHL)[4,9–22] as the diagnosis of systemic NHL may or may not have been known when WT was detected. As for Hodgkin lymphoma (HL), it generally develops in the lymph nodes and spleen; extra nodal localisations may be observed in advanced stages of the disease. In the early stages, HL involving extra nodal sites or exclusively located outside the lymphatic structures is quite rare, representing roughly 1% of the overall incidence of HL[23]. The synchronous existence of two distinct primary tumours, without common histological and histogenetical aspects in the same site, is a rare occurrence referred to as 'collision tumour'[24]. The aetiology of synchronous tumours is still unclear and their coexistence represents a problem for surgeons, oncologists and pathologists in terms of diagnosis, treatment and follow-up. Collision HL and