Case Report **IJCR (2020) 4:112**

International Journal of Case Reports
(ISSN:2572-8776)

A rare case of Warthin-like papillary thyroid carcinoma associated to Graves' disease

Olfa Adounia, Imen Zawatia , Sabrine Boukhrisb, Ilhem Bettaieba, Fatma Tekaria, Aida Gouchaa, riadh charguib, Amor Gamoudia, Khaled Rahalb

aDepartement of Immuno-Histo-Cytology, Salah Azaiez Institute, Tunis, Tunisia.
bDepartment of surgical oncology, Salah Azaiez Institute, Tunis, Tunisia.

ABSTRACT

Warthin-like variant of papillary thyroid carcinoma (WLV-PTC) is a recently described rare variant of papillary thyroid carcinoma with favorable prognosis. We present a rare case of WLV-PTC in a 29-year-old female patient with graves' disease along with emphasis on the difficulty of positive diagnosis both clinically and histologically since the association of thyroid nodules with Graves' disease is not common and this variant of thyroid cancer is freqyently misdiagnosed with other subtypes.

Keywords: graves'disease, thyroid cancer, warthin-like variant.

***Correspondence to Author:**
Sabrine Boukhris
Department of surgical oncology, Salah Azaiez Institute, Tunis, Tunisia.

How to cite this article:
Olfa Adouni, Imen Zawati , Sabrine Boukhris, Ilhem Bettaieb, Fatma Tekari, Aida Goucha, riadh chargui, Amor Gamoudi, Khaled Rahal. A rare case of Warthin-like papillary thyroid carcinoma associated to Graves' disease . International Journal of Case Reports, 2020 4:112

eSciPub LLC, Houston, TX USA.
Website: http://escipub.com/

Introduction:

Graves' disease (GD) is an autoimmune disease of the thyroid responsible of 50 to 80% of all cases of hyperthyroidism. It results from stimulatory antibodies directed against the thyroid-stimulating hormone (TSH) receptor which induce hypertrophy of the thyroid follicles and increases the production of thyroid horm aused that is clinically characterised by hyperthyroidism resulting from [1, 2]. Graves' disease was originally considered as a protection against thyroid cancer and malignant transformation was thought to be rare [1] . However, few recent studies have reported an increased frequency of thyroid nodules and cancer occuring in patients with GD compared to the normal population[3]. Palpable thyroid nodules occur in 10% to 15% of patients with GD and malignancy rate varies from 2% to 46% in case of GD associated with palpable nodules[1]. The mechanisms of carcinogenesis in Graves' disease may be entirely autoimmune with antibodies promoting thyrocyte growth in normal as well as in neoplastic cell given the or there may be different mechanisms common to both.[1] [3, 4]. Papillary thyroid carcinoma (PTC) is the most common histological type of thyroid carcinoma[5]. The Warthin-like variant of PTC (WLPTC) is a rare variant of PTC that is is currently considered as a histological subtype of the oncocytic variant[6]. It has generally been considered tohave having similar or less aggressive clinical presentation and prognosis to classic PTC [6, 7]. We present a rare case of WLPTC with emphasis on histological characteristics of this peculiar variant associated to a Graves' disease.

Case report:

A 26-year-old female presented with a recent increase in thyroid volume associated with left basal cervical swelling . It was not associated with hoarseness of voice, dyspnea or dysphagia. She was receiving treatment for hyperthyroidism secondary to graves ' disease for the past 5 years . She had no history of radiation to the head and neck and no family history of thyroid cancer. Physical examination revealed an enlarged thyroid gland with left cervical swelling measuring 1 cm, mobile on swallowing. No palpable lymphadenopathy was noted. On Tc99 thyroid scintigraphy, there was consistent homogeneous fixation of the radiotracer at both lobes of the thyroid compatible with a Graves' disease and the left nodule was cold. Thyroid hormones level was normal. Fine needle aspiration under ultrasound guidance was done from the left thyroid nodule and result was suspicious for malignancy. the patient underwent total thyroidectomy. The extemporaneous examination confirmed the malignancy and bilateral central compartment node dissection was subsequently performed. . Macroscopic examination,showed a grey-white solid nodule in the superior pole of left lobe which measured . On histopathological examination, the nodule consisted essentially of encapsulated papillary formations mixed with a few vesicles. The axis of the papilla was occupied by a dense lymphoid infiltrate, often diffuse (Figure 2). The papillae and vesicles were lined by cells with irregular nuclei often clarified in frosted glass, grooved, overlapping and with pseudo-inclusions (Figure 3). The cytoplasm was abundant with oncocytic aspect (Figure 4). The capsule was thin with no invasion images. No vascular emboli were found. The adjacent thyroid parenchyma was a site of lymphocytic thyroiditis lesions. All the ganglia of the dissection Were of reaction aspect. The diagnosis of WLV-PTC was retained and the patient underwent 131radioactive iodine therapy (100 mCi). the post-treatment scan showed no abnormal uptake. At the one-year follow-up, the patient was in good health, the cervical US was negative for recurrences, and the stimulated thyroglobulin was within the expected range.

Discussion:

Papillary thyroid carcinoma (PTC) is the most common malignant neoplasm of the thyroid gland and many variants of PTC have been described including classic, follicular, tall cell, diffuse sclerosing, solid, oncocytic, columnar

cell, cribriformmorular, and clear cell variants [1][6] The WLV of PTC was first described in 1995, having a unique histomorphology similar to papillary cystadenoma lymphomatosum, or Warthin's tumour of the salivary gland [5].This rare variant is recently considered as a subtype of oncocytic papillary carcinoma . It is characterized by cells with oncocytic cytoplasm and nuclear features of papillary carcinoma lining papillary structures with dense lymphocytic infiltration in the stalks. The tumour cell nuclei clearly manifested the characteristics of papillary carcinoma gland[7] [5].

WLV-PTC represent less than 2% of all PTCs. However, it seems that the incidence is higher because WLV-PTCs are often diagnosed as classic, tall cell, or oncocytic variants [6]. The published litterature reports a female predominance in between the 4th and the 5th decade of life [8]. Most WLV-PTCs are associated with lymphocytic or Hashimoto's thyroiditis.[4, 5]

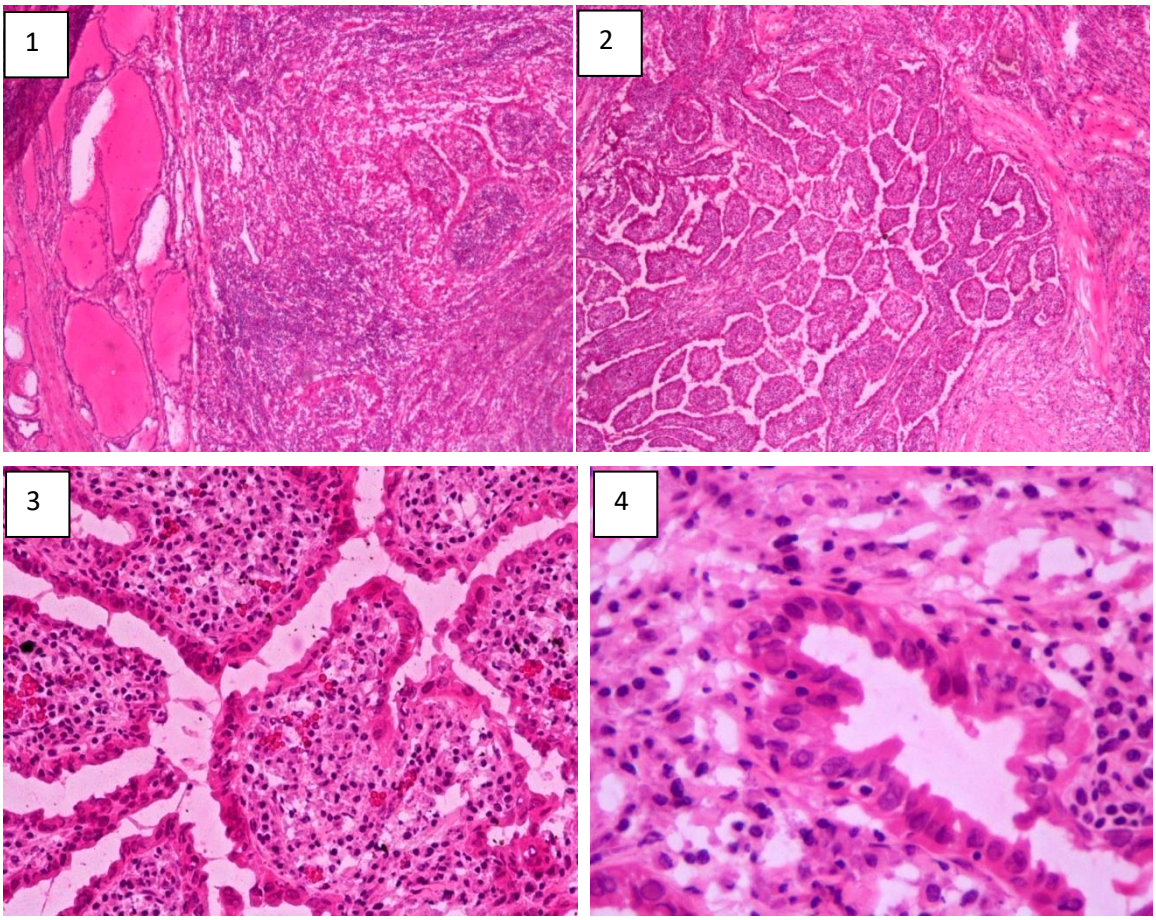

Figure 1: Encapsulated papillary formation circumscribe by vesicles (HEx5).

Figure 2: The axis of the papilla was occupied by a dense lymphoid infiltrate, often diffuse (HEx10).

Figure 3: The papillae were lined by cells with irregular nuclei (HEx20).

Figure 4: The cytoplasm was abundant with oncocytic aspect (HEx40).

An accurate preoperative diagnosis of WLV-PTC can be very challenging since ultrasound evaluation as well as cytological diagnosis are quiete difficult . On ultrasound , it may appear as hypogenic nodule, microlobulated or having irregular margin, with presence of microcalcifications, and taller-than-wide shape, or in other cases as well-defined, oval-shaped nodules containing cystic component. [7]. The ultrasound, in our case, showed an hypogenic well- limited lesion in the left lobe.

Since wvptc is frequently associated to lymphocytic thyroiditis, It is difficult to differentiate this rare entity from dominant lymphocytic infiltration on FNA cytology and the background of lymphocytic thyroiditis may increase the false negative cases [6] [7].

The histological appearance of WLV is similar to those of the tall cell TCVs were originally described as having a distinctive cell type in a columnar shape with cell height ≥2-fold greater than cell breadth thyroiditis.[4, 5].

The feature distinguishing WLV-PTC from all other histological types and subtypes of thyroid cancer is the presence of lymphocytic stroma in the papillary stalks. This stroma may also contain follicles with germinal centres[5]

Prognosis of thyroid cancer in patients with GD remain controversial. Some authors reported a more aggressive presentation and poorer outcomes than those without evidence of autoimmune hyperthyroidism .Other authors, however, did not find prognostic significance attributed to this variant of papillary carcinoma[3]. Generally WVPTC is known to have a similar clinical representation and prognosis to conventional PTC or to have better prognosis with lower incidence of extracapsular extension, nodal metastasis, recurrence or distant metastasis [7]. The presence of lymphoid infiltration in WLV-PTCs is considered by some studies as an indicator of favourable prognosis,[6] [5].

Conclusion :

Although WLV of PTC is relatively uncommon and its prognosis is favourable, it is important to determine the histopathological features of these tumour, s. therefore, more studies with larger series of patients are needed to determine its clinicopathological features.

References :

1. Staniforth JU, Erdirimanne S, Eslick GD. Thyroid carcinoma in Graves' disease: a meta-analysis. International Journal of Surgery, 2016; 27: 118-125.
2. Smith TJ, Hegedüs L. Graves' disease. New England Journal of Medicine, 2016; 375: 1552-1565.
3. Pohl M, Grabellus F, Worm K et al. Intermediate microRNA expression profile in Graves' disease falls between that of normal thyroid tissue and papillary thyroid carcinoma. Journal of clinical pathology, 2017; 70: 33-39.
4. Hirokawa M, Nishihara E, Takada N et al. Warthin-like papillary thyroid carcinoma with immunoglobulin G4-positive plasma cells possibly related to Hashimoto's thyroiditis. Endocrine journal, 2017; 65: 175-180.
5. Jun HH, Kim SM, Hong SW et al. Warthin-like variant of papillary thyroid carcinoma: single institution experience. ANZ journal of surgery, 2016; 86: 492-494.
6. Yeo M-k, Bae JS, Lee S et al. The Warthin-like variant of papillary thyroid carcinoma: a comparison with classic type in the patients with coexisting Hashimoto's thyroiditis. International journal of endocrinology, 2015; 2015.
7. Kim GR, Shin JH, Hahn SY et al. Ultrasonographic features and clinical characteristics of Warthin-like variant of papillary thyroid carcinoma. Endocrine journal, 2016; 63: 329-335.
8. Sak SD. Variants of papillary thyroid carcinoma: multiple faces of a familiar tumor. Turk Patoloji Derg, 2015; 31: 34-47.