WARTHIN TUMOR LIKE PAPILLARY CARCINOMA OF THYROID: A RARE OCCURENCE

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ABSTRACT

INTRODUCTION

Among the thyroid cancers, papillary carcinoma is the most common type. Warthin tumor like papillary carcinoma of thyroid is a rare variant of papillary carcinoma. The distinguishing feature of this rare variant is papillary formations lined by tumor cells with oncocytic cytoplasm with nuclear features of papillary carcinoma and lymphoplasmacytic infiltrate in the papillary stalks with striking histological resemblance to Warthin's tumor of salivary glands. A 46 years old female with complaints of painless swelling of the neck for four years and gradually increasing in size, measuring 3x2.5 cm on the right lobe of the thyroid gland. The swelling moved with deglutition, non-tender and firm to hard in consistency. Thyroid function was within normal limits. FNAC suggested a diagnosis of oxyphilic variant of papillary carcinoma of thyroid. It showed syncytial aggregates, sheets of cells and few papillary structures with focal nuclear crowding. The patient underwent bilateral total thyroidectomy and neck dissection. Microscopic examination showed predominantly follicles and small papillary structures lined by cells having eosinophilic cytoplasm and clear nucleus. There was lymphoid stroma in the core of papillae and interfolllicular areas. Hyalinized collagen, dystrophic calcification and follicles without colloid matter infiltrating the hyalinised area were seen. No lymphovascualr tumour embolization were noted. This tumor is found more commonly in women with Hashimoto's thyroiditis. The prognosis is favourable as conventional papillary carcinoma. About 8% of Warthin's tumor are detected in extraparotid locations.

KEYWORDS

Warthin Tumor, Papillary Carcinoma, Oxyphilic.

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INTRODUCTION: Among the thyroid cancers, papillary carcinoma is the most common type. Warthin tumour like papillary carcinoma of thyroid is a rare variant of papillary carcinoma.[1] The distinguishing feature of this rare variant is papillary formations lined by tumour cells with oncocytic cytoplasm with nuclear features of papillary carcinoma and lymphoplasmacytic infiltrate in the papillary stalks.[2] In 1995, Apel et al. reported this new variant of papillary thyroid carcinoma with a series of 13 cases and named this type 'Warthin-like papillary thyroid carcinoma'. The striking histological resemblance to Warthin's tumour of salivary glands has earned its present name. These tumours have been reported to behave similarly as the conventional papillary carcinoma and its prognosis has been almost similar.[3] This variant composes an important place in the spectrum of differential diagnosis of oncocytic lesions that contains Hashimoto's thyroiditis at one end and the Hurthle cell carcinoma on the other end. We are reporting this case in a female patient of 46 years old for its.

CASE: A 46 years old female patient was admitted with complaints of painless swelling of the neck for four years. The swelling was gradually increasing in size.

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On physical examination, a swelling measuring 3x2.5 cm was noted on the right lobe of the thyroid gland. The swelling moved with deglutition and was non tender and firm to hard in consistency.

Thyroid function blood tests were within normal limits.

Ultrasound of the thyroid gland revealed a hypoechoic solid lesion in the upper pole of the right lobe measuring 2x2 cm. The left lobe was normal. After fine needle aspiration cytology, a diagnosis of oxyphilic variant of papillary carcinoma of thyroid was suggested.

Fine needle aspiration cytology showed syncytial aggregates, sheets of cells and few papillary structures with focal nuclear crowding and overlapping. The cells were large, oval with pale nuclei, several intranuclear cytoplasmic inclusions, densely granular oxyphilic cytoplasm and distinct cell borders.

Smears also showed few macrophages, multinucleated giant cells and scanty colloid.

According to these cytological findings, a diagnosis of oxyphilic variant of papillary carcinoma of thyroid was suggested.

The patient underwent bilateral total thyroidectomy and neck dissection.

Thyroidectomy specimen was totally 6x5 cm in size.

On sectioning, a well circumscribed firm whitish solid nodule measuring 3.5x3cm was noticed in the right lobe.

No lymph nodes were identified.

Microscopic examination showed predominantly follicles and small papillary structures lined by cells having eosinophilic cytoplasm and clear nucleus. There was lymphoid stroma in the core of papillae and interfolllicular

areas. Hyalinized collagen, dystrophic calcification and follicles without colloid matter infiltrating the hyalinised area were seen. No lymphovascualr tumour embolization were noted.

A diagnosis of Warthin Tumour like papillary Carcinoma of thyroid was established.

DISCUSSION: Papillary carcinoma of the thyroid exhibits a wide range of morphological appearances resulting in several distinct histopathological variant.[4]

Warthin–like tumour of thyroid is a recently described variant of thyroid carcinoma. It was originally described by Apel et al in 1995. The name 'Warthin-like variant' was derived from its histological resemblance to papillary cystadenoma lymphomatosum or Warthin's tumour of salivary glands. This was followed by a case report from Vera-Sempere et al. They reported the clinicopathological features of 17 cases of Warthin like tumour. This tumour is found more commonly in women with Hashimoto's thyroiditis.[4] Lam et al reported a case of Warthin tumour like with anaplastic changes in a 74 years old women.[5] Nuray et al reported that most of the patients are female (90%) with age ranging between 23-85 years. Tumour size varies among 0.3 to 5.0 cm in diameter. Lymphocytic thyroiditis was seen in 90% cases.

Histologically they have large polygonal cells with abundant eosinophilic, finely granular cytoplasm lines on the papillae surrounded by dense chronic inflammatory infiltrate consisting of predominantly lymphocytes and plasma cells.[6]

In the present case, predominantly follicles and small papillary structures lined by cells having eosinophilic cytoplasm and clear nucleus are seen. There is lymphoid stroma in the core of papillae and interfolllicular areas. Hyalinized collagen, dystrophic calcification and follicles without colloid matter infiltrating the hyalinised area are seen. No lymphovascualr tumour embolization was noted. As the morphological picture was clear, immunohistochemistry was not done.

The prognosis is favourable as conventional papillary carcinoma in most reported patients. Only two cases reported so far showed worse prognosis, one was with anaplastic features and another with dedifferentiated component.[6]

Warthin–like tumour variant should be differentiated from other variants of papillary carcinoma (such as tall cell variant, Hurthle cell variant and diffuse sclerosing variant), Hurthle cell carcinoma, Hashimoto's disease and extraparotid Warthin's tumor.[7]

Tall cell variant is characterised by a papillary structure with elongated oncocytes with a height that is more than twice their width and by neoplastic aggressiveness with more frequent vascular, capsular and nodal invasion.[8] Hurthle cell carcinomas are characterised by papillary architecture lined by oncocytic cells with nuclear features of papillary carcinoma but lack the lymphoplasmacytic infiltrate.[7] Diffuse sclerosing varint has heavy lymphocytic infiltration and is characterised by the diffuse involvement of one or both thyroid lobes, dense sclerosis, abundant psammoma bodies, extensive solid foci and squamous metaplasia.[8] In Hashimoto's thyroiditis, papillary mass of oncocytic cells with nuclear features of papillary carcinoma are not observed and the nuclei in Hashimoto's thyroiditis are more pleomorphic than papillary carcinoma.[6]

About 8% of Warthin's tumour are detected in extraparotid locations such as in the lymph nodes of the cervical region, submandibular gland, minor salivary glands of the oral cavity, pharynx and larynx.[5] Real extraparotid Warthin's tumour are not expected to be at any site other than cervical nodes and they do not show the nuclear features of papillary carcinoma.

CONCLUSION: Warthin tumour like papillary carcinoma of thyroid is a rare variant of papillary carcinoma. The distinguishing feature of this rare variant is papillary formations lined by tumour cells with oncocytic cytoplasm with nuclear features of papillary carcinoma and lymphoplasmacytic infiltrate in the papillary stalks. These tumours has been reported to behave similarly as the conventional papillary carcinoma and its prognosis has been almost similar. It should be included in the spectrum of differential diagnosis of oncocytic lesions that contains Hashimoto's thyroiditis at one end and the Hurthle cell carcinoma on the other end.

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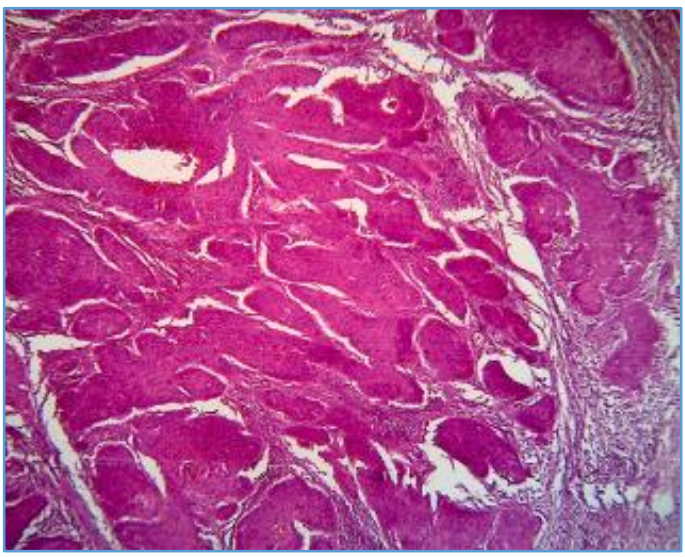

Figure 1: Tumour Cells in Papillary pattern.

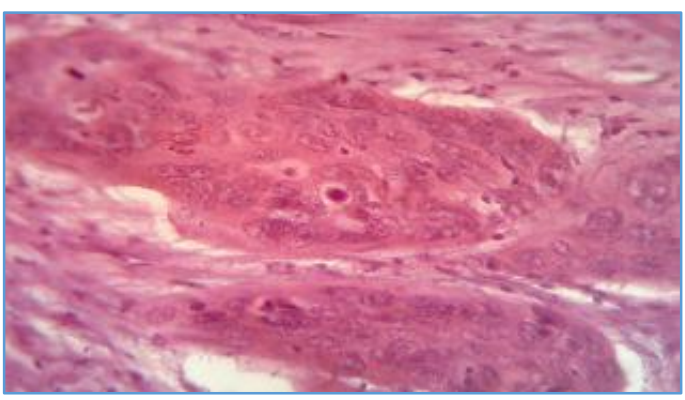

Figure 2: Tumour Cells having eosinophilic cytoplasm and clear nucleus

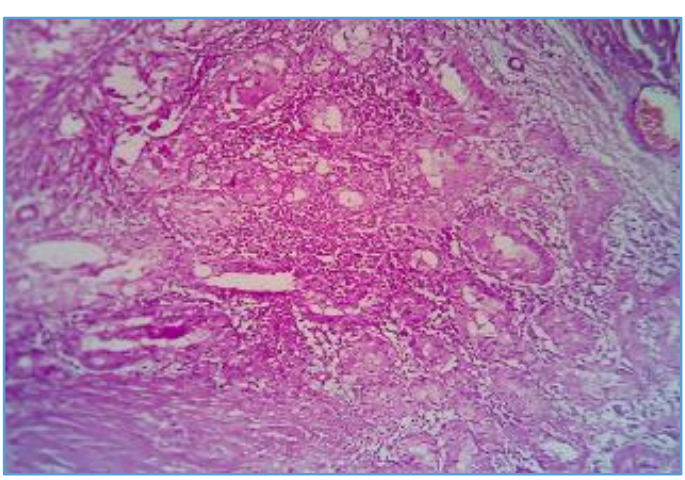

Figure 3: Lymphoid stroma in interfollicular areas