Case Report

Hashimoto's thyroiditis with papillary carcinoma of thyroid – a rare case report

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Abstract Hashimoto's thyroiditis is seven times more common in women than men. Papillary carcinoma is most prevalent type of thyroid malignancy is 2.5 times more common in women than men[1]. This case is being presented for the rare combination of lesions in a young female with hypoplastic (Lt) lobe of thyroid.
Keywords: Hashimoto's thyroiditis, papillary carcinoma thyroid, hypolastic lobe

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INTRODUCTION

The association between Hashimoto's thyroiditis and papillary carcinoma was first proposed in 1955 by Daily *et al*[1, 2]. Patients of Hashimoto's thyroiditis are at increased risk of neoplasia with most common malignancy being lymphoma, B-cell type, followed by plasmacytoma within the gland and mucoepidermoid carcinoma [3]. The exact causative relation between Hashimoto's thyroiditis and Papillary Carcinoma of thyroid is not clear[4]. We are presenting this case with an additional feature of hypolplastic left lobe of thyroid.

CASE REPORT

A 25 year old lady married four years back having a daughter of two year, presented with swelling in front of neck mainly on right side, slowly growing. Clinical examination revealed 4x3 cm, rounded, soft freely mobile non-tender non-pulsatile mass moving with deglutition. She was referred for ultrasonography (USG) of neck and Thyroid Function tests.On USG neck, (Rt) lobe of thyroid measured 5x2x2 cm with a solitary well defined nodule in lower pole of size 2.5x2.2x2.1 cm with grade II peri and intranodular vascularity. No calcification or necrosis seen. (Lt) lobe and is thumus severely hypoplastic, Adjacent major neck vessels appeared normal. No nodes were seen in neck. The features were suggesting Follicular Adenoma. Thyroid function tests revealed T 3 - 94.90 ng/dl (70-204), T 4 - 6.30 ug/dl (4.2-11.8) and TSH 3.610 uIU/ml (0.2-5.7), suggesting thyronormalcy. FNAC of the (Rt) thyroid nodule was inconclusive. Preoperative investigations revealed Haemoglobin 9.2 gm%, WBC count was 9300 cells/cmm with Neutrophils 61% and Lymphocytes 39%. Liver and kidney functions tests were within normal limits. Her ophthalmological findings were within normal limits with 6/6 vision in both eyes and there was no exopthalmos or ptosis. She was medically fit and was posted for (Rt) hemithyroidectomy.

MORPHOLOGY

Received specimen of hemithyroidectomy grayish 4x4x3 cm capsulated enlarged, firm in consistency weighing 80 gm. Cut surface shows a well defined nodule with peripheral whitis firm areas along with a small cystic space in the centre. The Surrounding areas also show whitish firm areas along with grayish soft areas. With haemorrhagic areas (Fig.1).

Microscopic Features

Multiple deep cut serial sections show thyroid follicles of variable sizes filled with variable amount of colloid, arranged in nodules separated by fibrous septae. Large areas of thyroid have been destroyed and replaced by replaced by fibrous tissue. The stroma shows abundant collection of lymphocytes and well formed lymphoid

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follicles with germinal centres (Fig. 2). At many places showed hyperplasia of Hurthle cells (Fig. 3). Also show tumour tissue arranged in branching papillae supported by fibrovascular core lined by cuboidal cells with ground glass nuclei. (Fig.4). at few places showed psammoma bodies. There was evidence of capsular invasion. No vascular emboli were seen. The lesion was diagnosed as Hashimoto's thyroiditis with papillary carcinoma of thyroid.

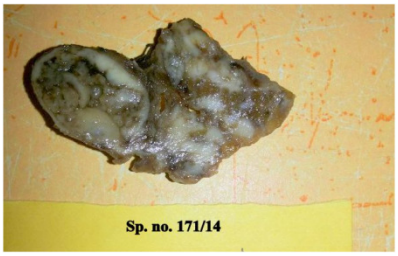

Figure 1: Cut section of hemithyroidectomy with solitary nodule and thumus Shows whitish firm areas along with central brown areas

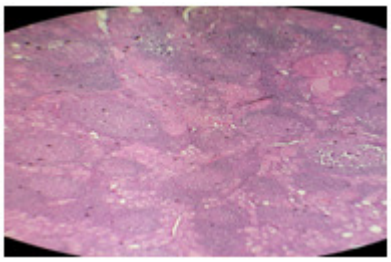

Figure 2: shows small thyroid follicles filled with variable Is amount of colloid and large areas replaced by abundant lymphocytes and classical lymphoid follicles with germinal centres seen at many places (H and E 100 X)

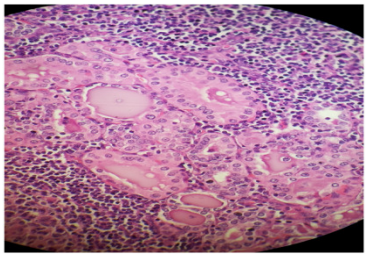

Figure 3: shows prominent Hurthle cells (centre) lining small follicles surrounded by lymphocytes (H and E 400 X)

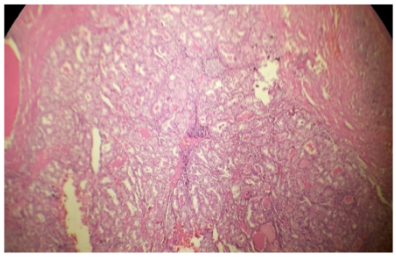

Figure 4: Shows tumour tissue arranged in papillary pattern lined by cuboidal cells and ground glass nuclei. (H and E 100 X)

DISCUSSION

The coexistence of Hashimoto's thyroiditis and papillary carcinoma is known[5]. There are a number of likely proposed mechanisms are found in the literature[1]. Wirtscchater *et al* described expression of RET/PTC 1 and RET/PTC 3 oncogenes in Hashimoto's patients. This theory was supported by Arif *et al* by demonstrating similar immunohistochemical stains for both diseases. Unger *et al* found expression of p63 in Hashimoto' patients with papillary carcinoma. Burstein *et al* proposed that both diseases are initiated by pleuripotent p63 positive stem cell remnants[1, 4]. Thyroid hemihypoplasia or aplasia is more common than total aplasia[1], which was detected in our case. If features of Hashimoto's thyroiditis are seen in a specimen, thorough grossing of thyroid specimen is recommended to rule out associated papillary carcinoma[2, 5].

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