CASE REPORT

Papillary Carcinoma of the Thyroglossal Duct Cyst with Synchronous Thyroid Microcarcinoma and Lymph Nodal Metastasis : A Case Report

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BACKGROUND

Thyroglossal Duct Cysts (TDC) are the most common congenital abnormality seen in the neck. Majority of the cases are benign. However, a rare complication is the development of papillary carcinoma in the cyst. This case report discusses a patient with Papillary Carcinoma of the thyroglossal cyst and papillary carcinoma of the thyroid.

Case Report

A 34 year old lady presented to the reproductive medicine department for evaluation on primary infertility. She was noticed to have a midline neck swelling and was referred to the department of endocrine surgery for further management. She had noticed the swelling for 10 years. There were no features of thyroid dysfunction or compressive symptoms. There was no family history of thyroid cancer.

On Clinical Examination, there was a 4×4 cm size, irregular spherical, firm swelling in midline subhyoid region, which moved up with deglutition and protrusion of the tongue. There was no palpable goiter or cervical lymphadenopathy.

An ultrasonography of the neck showed a well defined complex cystic lesion measuring 32×31×22mm with few papillary solid components containing micro calcifications and minimal vascularity; there were no thyroid lesions or significant cervical lymph nodes. Her TSH was 3.737 µIU/ml, T4 was 10.0µg/dL and FTC was 1.06 ng/dL. FNAC reported a typical cells suggestive of papillary thyroid carcinoma.

The patient underwent a Sistrunk's procedure and total thyroidectomy and removal of enlarged perithyroid central compartment nodes. Histopathological examination reported a 3.5 cm classical papillary carcinoma involving the thyroglossal cyst with concomitant papillary microcarcinoma (0.7cm) in the left lobe of thyroid, in a background of Hashimoto's thyroiditis in both lobes and two of three perithyroid lymph nodes with metastasis.

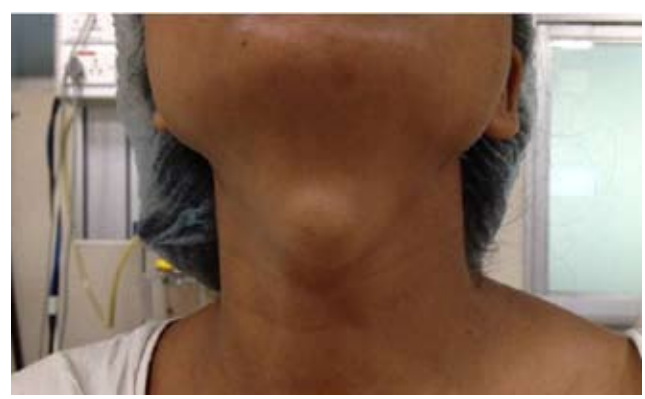

Fig. 1 : Clinical picture of the patient. The swelling moved with deglutition as well with protrusion of tongue.

Her post-operative recovery was uneventful. She has been planned for I-131 Radioiodine whole body scanning and ablation if required.

Discussion

Thyroglossal duct cysts (TDC) are the most common congenital midline swelling in the neck, occurring in around 7% of the population[1]. Thyroglossal duct is an epithelial connection between the foramen cecum and the thyroid gland. The duct normally gets obliterated during the 8th to 10th week of gestation. If the duct fails to obliterate completely, it can cause the development of a thyroglossal duct cyst. However, the presence

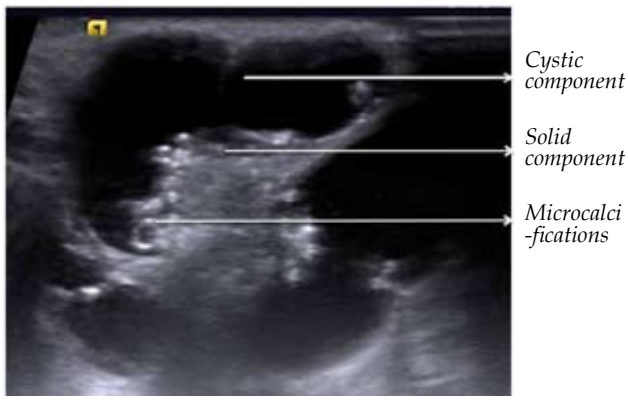

Fig. 2 : Ultrasound showing a well defined complex cystic lesion few papillary solid component with micro calcifications

of carcinoma in these cysts are very rare(<1.5%)[2] and are often diagnosed postoperatively on histopathology.

Controversy still exists regarding the optimal management of this condition, owing partly to its rare nature. Around 200 cases of this condition have been published in the literature. Most of the large case series have advocated a Sistrunk's procedure for the treatment[2–4].

The controversy exists with regard to the need for thyroidectomy in these patients. Some authors recommend a only Sistrunk's operation if the thyroid is sonologically normal. However, there are other reports of thyroid microcarcinoma in these patients[4–6]. Another reason for advocating a thyroidectomy is to enable follow up of these patients with Radioiodine scan, which would not be possible unless a thyroidectomy has been performed.

Some studies have recommended only a Sistrunk's procedure if the thyroid is clinically and radiologically normal[2] or if there is only focus of microcarcinoma in the TDC[3].

However, most of the larger case series including our own previously published series recommend either a concurrent thyroidectomy or a staged thyroidectomy in cases of thyroglossal cyst papillary carcinomas[3,4,6,7].

Based on our experience and literature review, we recommend that all cases of thyroglossal cyst papillary carcinomas diagnosed pre-operatively should be offered a concurrent total thyroidectomy with appropriate dissection of lymph nodes to permit complete therapy and facilitate follow up. For a post operative histological surprise, thyroidectomy can be completed at a second operation or the patient should be kept on clinical and ultrasound surveillance. Preoperative ultrasonography and fine needle cytology of thyroglossal cysts helps to suspect or confirm the diagnosis preoperatively, thereby enabling a single stage procedure involving Sistrunk's procedure and total thyroidectomy.

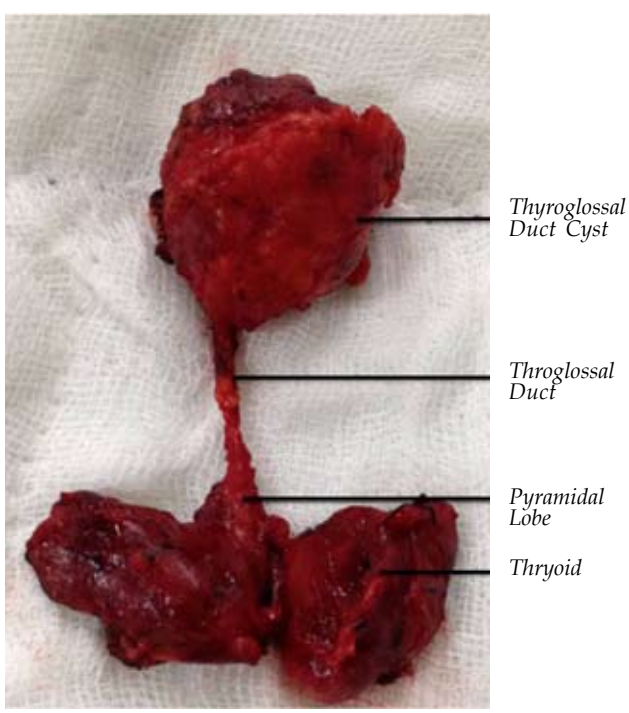

Fig. 3 : Excised surgical specimen

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