Ectopic Thyroid Tissue Masquerading as a Lateral Neck Mass: A Case Report

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Abstract The tissue bud that ultimately becomes the thyroid gland arises initially as a midline diverticulum in the floor of the pharynx. When the median thyroid analage does not descend in normal fashion, a lingual thyroid can result. It is thought that any thyroid tissue found in the lateral aspect of the neck, including around the vascular structures of the neck, may represent metastatic deposits from well-differentiated thyroid carcinoma. This is a case report of a 35 year old male presenting to the out-patient department with a swelling in the lateral aspect of the neck. The MRI report showed an enlarged level 2 lymph node in the lateral aspect of right side of the neck for which surgery was done and the specimen sent for HPE. Histopathological report gave a surprising report of thyroid tissue with normal follicular cells. But literature says that thyroid tissue lateral to the normal thyroid tissue is essentially metastatic papillary carcinoma. Only very few previous case reports showing the existence of ectopic thyroid in the lateral aspect of the neck have been documented (1,2,3). This case has been reported for its rarity.

Keywords Ectopic thyroid • Lateral aberrant thyroid

Case History

A 35 year old male presented with complaints of swelling in the lateral aspect of right side of neck for the past 1 year exhibiting rapid progression since the past 3 months. There was no dysphagia, dyspnoea or hoarseness of voice. MRI of the neck indicated enlarged level 2 lymph nodes on the right side of the neck measuring 3.3×2.8 cms (Figs. 1 and 2). ENT examination was normal. The result of FNAC was inconclusive and a whole node biopsy was requested for by the pathologist. The patient was operated on and the swelling removed. The swelling seemed to be vascular and did not have the macroscopic picture of lymph node. Histopathological results surprisingly indicated normal thyroid tissue with normal follicular cells (Fig. 3). On further request additional bits of the same specimen was done. The result still indicated normal thyroid tissue. A swelling in the lateral aspect of the neck with thyroid elements is usually considered to be a lateral aberrant thyroid or more recently as metastatic papillary carcinoma of the thyroid. An ultrasound of the neck revealed a nodule measuring 1×1.5 cm in the inferior pole of the right lobe of thyroid and multiple tiny nodules in the opposite gland. Impression was that of multinodular goitre. This scan was followed-up with a radioactive iodine (RAI) uptake study. 4mci of 99m Tc04 was injected intravenously and static images of the neck in anterior projection was acquired 20 min later. The findings were (1) Mildly enlarged right lobe of the thyroid gland with normal trapping function (2) Mildly inhomogeneous uptake seen in both lobes with a cold nodule in the right lobe. FNAC of the thyroid nodule did not show any malignant foci. A subtotal thyroidectomy was planned as usually done for a patient with multinodular

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Fig. 1 MRI of the neck showing ? Enlarged level 2 lymphnodes

goitre; surgery was performed and the specimen sent for histopathology. The report indicated adenomatous goitre with no evidence of malignancy. This report clearly indicated that both the thyroid and the lateral neck tissues were two different masses. Since the histopathological report of the lateral neck tissue also indicated normal thyroid tissue, it should be considered as thyroid tissue occurring at an abnormal location, namely as Ectopic thyroid.

Fig. 2 MRI of the neck

Fig. 3 Histopathological slide examination

Discussion

Lateral aberrant thyroid tissue i.e. the tissue located lateral to the jugular vein has three morphologic manifestations [1, 2]. This tissue may be found as a nodule attached by connective tissue to the mother gland. These thyroid tissue “islands,” which pull away from the visceral body during development, are nevertheless normal. The second site is within lymph nodes or their remnants. Cervical lymph node containing thyroid follicles may be clinically considered to be metastatic papillary thyroid carcinoma [3]. However, the existence of heterotopic thyroid tissue within cervical glands has been reported. Six such cases of normal thyroid gland at 5- μ m sections were described by Sawicki et al. [4]. The final morphologic expression of laterally aberrant thyroid tissue must be termed congenital.

Genetic deletion of *Shh* in transgenic animals causes severe organ malformations [5]. However, instead of being divided into two lobes connected by a thin pretracheal isthmus, the thyroid of *Shh*-deficient mice maintains the shape of a single tissue mass throughout development. Moreover, the final position of the gland is always unilateral, most often to the left side of the presumptive trachea, and its size equals that of a single lobe in age matched controls [6].

This is a case of an ectopically located laterally aberrant thyroid tissue. The patient presented with a swelling in the lateral side of the neck. The case was operated and the histopathology report indicated normal thyroid tissue. Based on the USG neck findings of a multinodular goitre with a prominent nodule in the right lobe of thyroid, the RAI uptake study showing a cold nodule on the right lobe and FNAC showing no signs of malignancy, a subtotal thyroidectomy was done. The report indicated normal thyroid tissue again. Thus this is a case of thyroid tissue situated normally in the anterior aspect of the neck associated with an ectopic thyroid tissue in the lateral

aspect of the neck thus refuting the theory of a lateral aberrant thyroid always being a case of metastatic papillary carcinomatous deposits. This case therefore makes the entity of *lateral aberrant thyroid* a possible reality.

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