Right-sided hemiagenesis of the thyroid lobe and isthmus: A case report

Prabhat Kumar Tiwari, M Baxi1, J Baxi1, D Koirala
Departments of Radiology and 1Surgery, Manipal Teaching Hospital, PO Box: 341, Phulbari, Pokhara, Nepal

Correspondence: Dr Mukta Baxi, Department of Surgery, Manipal Teaching Hospital, PO Box: 341, Phulbari, Pokhara, Nepal.
E-mail: muktabaxi@yahoo.com

Abstract

Unilateral or bilateral hypoplasia or agenesis of one or both thyroid lobes, with or without isthmic agenesis, is a rare developmental anomaly. Hemiagenesis of the left lobe is far commoner than of the right. Clinically, these patients may be euthyroid, hyperthyroid, or hypothyroid. Ultrasonography is usually able to diagnose this condition easily, as we demonstrate in this case report of a 37-year-old lady with an incidentally detected thyroid nodule who was found to have hemiagenesis of the right lobe and isthmus.

Key words: Congenital anomalies; hemiagenesis; thyroid

Discussion

Congenital thyroid anomalies are rare. They may be related to abnormal descent of the thyroid gland or to structural abnormalities in thyroid development, such as hypoplasia or hemiagenesis with or without isthmic agenesis.

A literature review in the year 2000 documented 256 cases of hemiagenesis.4 We could find 51 new cases published between 2000 and 2007 in the English literature. Left-sided hemiagenesis is far commoner than right-sided hemiagenesis,1,2,5–10 with a left : right ratio of 4:1. The prevalence of this disorder, as documented in 2845 Belgian school children who were screened by USG for congenital thyroid anomalies, was found to be 0.2%.11

Though the etiology of hemiagenesis is not clearly known and most of the cases are sporadic, a few may be familial and there may be a genetic predisposition.12–16 Although patients may have a normal thyroid lobe with euthyroidism,1,3 both hypothyroidism13,14 and...
hyperthyroidism,[4,16–18] are known to occur. Other anomalies such as benign euthyroid adenoma,[19] thyroiditis,[20] multinodular goiter,[1,2,8,21] papillary carcinoma,[7,9,22] and primary hyperparathyroidism[5] have also been reported.

**Figure 1:** Transverse USG image shows multiple nodules in the left thyroid gland

**Figure 2:** Transverse USG image shows agenesis of the right lobe
Our patient had a euthyroid colloid nodule. The associated cyclical mastalgia and bilateral fibroadenosis were most likely coincidental findings.

As in our case, most patients with hемiagenesis are diagnosed incidentally.[1,2,8,11] USG is a useful modality to detect this anomaly. In endemic zones, there may be a high incidence of adenomatous nodules and colloid cysts in the single lobe. Malignancy always remains a cause for concern. Though a CT scan was performed in our patient, other modalities may not always be required to confirm the diagnosis of hемiagenesis, USG usually being diagnostic.[8,11,23-26]

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Source of Support: Nil, Conflict of Interest: None declared.