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CASE REPORT

Thyroid hemiagenesis: a case report

Tiroit hemiagenezi: Olgu sunumu

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Thyroid hemiagenesis is usually diagnosed incidentally during examination for other thyroid gland diseases. Iodine-123 thyroid scan of a 25-year-old woman showed a normal homogeneous right thyroid lobe, but no uptake in the left lobe. Ultrasonography of the neck confirmed the absence of the left thyroid lobe, while the right lobe was homogeneous and normal. Thyroid hemiagenesis should be included in the differential diagnosis of thyroid diseases.

Key Words: Diagnosis, differential; thyroid diseases/diagnosis/radionuclide imaging; thyroid gland/abnormalities/ultrasonography /radionuclide imaging.

Tiroid hemiagenezi, tiroit hastalıklarının ayırıcı tanısında hatırlanması gereken nadir bir hastalıktır. Tanı genellikle diğer tiroit hastalıklarına yönelik testler sırasında konmaktadır. Yirmi beş yaşındaki bir kadın hastanın iyot 123 tiroid sintigrafisinde sağ tarafta normal homojen tiroit lobu görünümü varken, sol lobda iyot tutulumu olmadığı gözlendi. Ultrasonografi ile sol tiroit lobunun olmadığı doğrulanırken, sağ lobun tamamen normal, homojen görünümde olduğu gözlendi.

Anahtar Sözcükler: Tanı, ayırıcı; tiroit hastalıkları/tanı/radionüklid görüntüleme; tidoit bezi/anormallik/ultrasonografi/radionüklid görüntüleme.

Thyroid hemiagenesis is a rare congenital anomaly in which one lobe of the thyroid gland fails to develop. Unlike other thyroid anomalies such as total agenesis (cretenism), accessory thyroids, and thyroglossal duct cysts, hemiagenesis is not always included in the differential diagnosis. It is usually detected incidentally during examination for other diseases of the thyroid gland.

CASE REPORT

A twenty-five-year-old woman with no previous history of a thyroid disorder or surgery presented with symptoms of nasal stuffiness and mouth breathing during sleep. On physical examination, the presenting symptoms were found to be associated with a deviated nasal septum. She had previously undergone thyroid function tests, ultrasonography, and a thyroid scan at another center for symptoms of insomnia, irritability and nervousness.

The results of thyroid function tests were all within normal limits. Iodine-123 scintigrams revealed a normal homogeneous right thyroid lobe, and the absence of uptake in the left lobe (Fig. 1).

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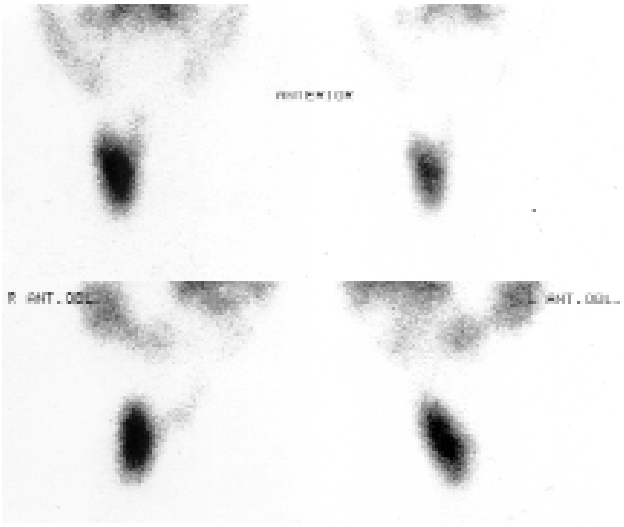

Fig. 1 - Iodine-123 thyroid scan showing a normal homogeneous right thyroid lobe, and the absence of uptake in the left lobe.

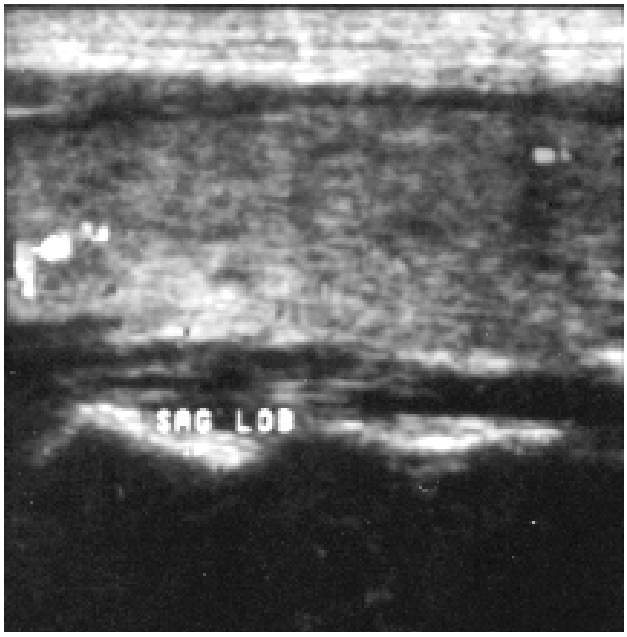

Fig. 2 - Ultrasonography of the neck showing the absence of the left thyroid lobe with a normal homogeneous right lobe.

Ultrasonography of the neck confirmed the absence of the left thyroid lobe with a normal homogeneous right thyroid lobe (Fig. 2). The patient was included into a follow-up program without the need for any surgical intervention.

DISCUSSION

Thyroid hemiagenesis is a rare embryologic anomaly in which one lobe of the thyroid fails to develop. The cause of the anomaly is unknown. It is usually diagnosed incidentally during examination for other diseases of the thyroid gland. Its incidence is less than 1 in 1000 patients with documented thyroid diseases.[1] In most reported cases, a symptomatic, anatomic or functional lesion exists in the remaining thyroid lobe.[1] It may be found in conjunction with any type of thyroid disorder including adenomatous goiter, carcinoma, thyrotoxicosis, or hypothyroidism,[1-6] the latter being the most common accompaniment.[1] The absence of the left lobe and the isthmus is encountered in 80% and in 50% of patients, respectively.[1,3,7]

Although the detection of thyroid hemiagenesis was mainly through incidental findings in postmortem studies,[7] the advent of scintigraphy has led to a dramatic increase in the number of reported cases over the last two decades, totalling about 200 cases with a marked female preponderance.[1-9]

The diagnosis of thyroid hemiagenesis is usually made via the absence of uptake during a thyroid scan. The use of technetium-99m pertechnetate radionuclide angiography, ultrasound imaging, computed tomography, or magnetic resonance imaging has been advocated in confirming the diagnosis.[10,11]

Thyroid hemiagenesis appears to be a benign entity that may be found during the investigation of thyroid diseases. Recognition of this rare congenital anomaly is important for the head and neck surgeon concerned in the management of thyroid diseases. As in the presented case, this anomaly may be found without any coexistent disease of the thyroid gland.

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