Thyroid hemiagenesis: a case report

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ABSTRACT

Thyroid hemiagenesis is a rare entity in the literature. Developmental hemi-thyroid anomalies can result from either an abnormal descent or an agenesis of one lobe of the thyroid gland. This study aimed at presenting a thyroid hemiagenesis case incidentally diagnosed by neck ultrasonography (USG), who had complaints of pain and swelling in the neck. USG examination revealed lack of left thyroid lobe and multiple nodules in the right lobe. Fine Needle Aspiration Biopsy (FNAB) showed follicular neoplasia, and right subtotal thyroidectomy was performed. We report the rarity of the condition and emphasize the role of imaging techniques in preoperative diagnosis and subsequent management.

Keywords: Thyroid, hemiagenesis, surgery

INTRODUCTION

Thyroid hemiagenesis is a rare thyroid pathology characterized by the deficient development of a single thyroid lobe or both a thyroid lobe and the isthmus (1), which was first reported by Handfield-Jones in 1866 (2). Thyroid hemiagenesis is usually identified incidentally with imaging techniques for the investigation of thyroid hormone disorders or evaluation of other complaints. A prevalence study with USG has indicated an incidence of 0.05% (3). We aimed to present a thyroid hemiagenesis case incidentally diagnosed by neck ultrasonography, who presented with complaints of pain and swelling in the neck.

CASE REPORT

The patient was a 32-year-old female, under follow-up for type-II diabetes mellitus (DM) for 7 years, who was presented with chief complaint of neck pain and swelling and underwent neck ultrasonography. Ultrasonography examination revealed lack of left thyroid lobe and multiple nodules in the right lobe, the largest measuring 12.8 x 7.1 mm. Laboratory values were as follows; FT3: 2.84 pg/mL, FT4: 1.15 ng/dL, TSH: 2.8 uU/mL (euthyroidism). Fine Needle Aspiration Biopsy showed follicular neoplasia, and she was referred to our out-patient clinic. Neck examination was within normal limits. Scintigraphy examination revealed lack of left thyroid lobe and hypoactive nodules in right lobe (Figure 1). Surgery was planned. Patient underwent right lobectomy. Left thyroid region was empty and a parathyroid-like yellow tissue was present in that region (Figure 2). Post-operative period was uneventful and the patient was discharged on the second post-operative day. Informed consent was obtained from the patient for both operation and presentation.

DISCUSSION

According to the literature, thyroid hemiagenesis is associated with a female predominance of 3:1, and it more often affects the left lobe, at a ratio of 4:1, as in our patient (3,4). The etiology of thyroid hemiagenesis is not clearly known. Aberrant thyroid migration and genetic component involving mutations in one or several genes that are known to control thyroid morphogenesis/migration have been suggested (5). The isthmus was present in about half of the reported cases although it was absent in our patient (6,7). These patients may have follicular and papillary neoplasms, Graves’ disease with thyrotoxicosis, hypothyroidism or hyperthyroidism and as in our case, surgery may be indicated (6-8).
Thyroid hemiagenesis is a rare developmental anomaly of unknown etiology, usually identified incidentally with imaging techniques. Pre-operative diagnosis of thyroid hemiagenesis prevents unnecessary surgical interventions.
Tiroid hemiagenezisi: Bir olgu sunumu

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ÖZET


Anahtar Kelimeler: Tiroid, hemiagenezi, cerrahi

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