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Case report

Primary thyroid lymphoma: A case report and review of the literature

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HIGHLIGHTS

- Primary thyroid lymphomas are very rare.
- New immunohistochemical and molecular techniques have improved the diagnostic accuracy with corebiopsy limiting surgery.
- Surgery has a small role in PTL and when needed it should be performed by a specialized surgeon to decrease morbidity.

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ABSTRACT

Introduction: A rapidly enlarging mass of the anterior compartment of the neck with compressive symptoms may represent, among other diagnosis, a neoplasm of the thyroid gland.
Presentation of case: We describe the case of a 59-year-old woman referred to the endocrine surgical unit because of compressive cervical symptoms for 3 months. The cervical ultrasound revealed a sub-sternal goiter with heterogeneous echo structure and the fine-needle aspirating cytology was inconclusive. Given the large impact of symptoms on life quality, she was submitted to a total thyroidectomy. Histological examination of the surgical specimen revealed the presence of a Diffuse Large B Cell Lymphoma of the thyroid.
Discussion: Primary thyroid lymphomas are rare and there are few randomized studies for diagnostic and therapeutic guidance. New immunohistochemical and molecular techniques have improved the diagnostic accuracy with corebiopsy limiting the role of surgery. The treatment should first include the control of local disease with radiotherapy and/or surgery combined with chemotherapy to control obscure or disseminated disease. Palliative surgery may be needed to relieve airway compression symptoms. Under these circumstances, surgery should be performed by a specialized surgeon to decrease the associated morbidity. The prognosis of patients depends on the histological classification of the tumor and the stage of the disease.
Conclusion: Due to the rarity of the disease, each case must be evaluated and treated individually, since there is not a consensual therapeutic approach.

1. Introduction

Primary thyroid lymphoma (PTL) is a rare entity and is defined as a lymphoma involving only the thyroid gland or the thyroid gland and regional lymph nodes without contiguity or metastasis of other areas at the time of diagnosis [1].

Since it is a rare entity, the diagnosis can be a challenge and may influence the treatment, as shown in this case report. The importance of recognizing primary thyroid lymphoma lies in the fact that this disease is quite curable without the need for extensive surgery if recognized early. We present a PTL case report submitted to surgery due to the lack of definitive diagnosis.

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2. Case report

A 59-year-old woman was referred to the endocrine surgical unit due to compressive cervical symptoms. Her medical history included hypertension. There was no known history of cervical irradiation or family history of thyroid cancer. The patient mentioned that her child was diagnosed with a mucosa-associated lymphoid tissue lymphoma (MALT) of the parotid gland 3 months prior to our observation. She presented with a gradual onset of anterior cervical pain and dysphagia with 3 months of evolution and emergence of dysphonia 15 days before consultation. Laboratory tests showed normal thyroid function, with no significant deviations. The cervical ultrasound (Fig. 1) revealed an enlarged thyroid gland with heterogeneous echo structure, revealing a nodular lesion occupying almost the entire left lobe, migrating to the mediastinum, correlated with a substernal goiter. No enlarged lymph nodes were noticed.

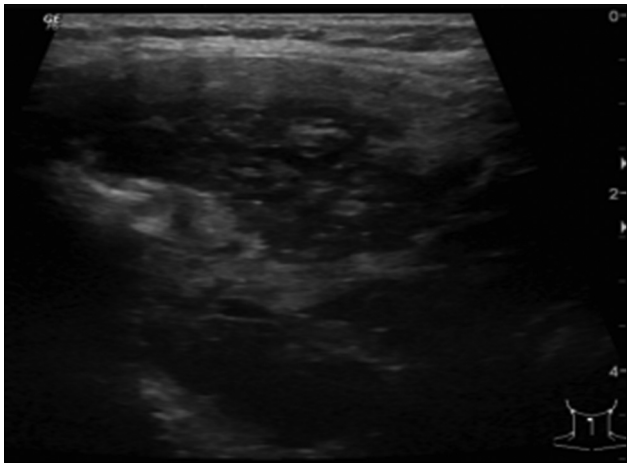

Fig. 1. Cervical ultrasound: sub sternal goiter with heterogeneous echo structure. No enlarged lymph nodes.

Fine needle aspiration cytology (FNAC) of the thyroid gland was performed twice, proving both times to be inconclusive. The vocal cords were evaluated by laryngoscopy revealing paralysis of the left vocal cord with good compensation of the right cord and no involvement of the glottic lumen.

The patient was submitted to a total thyroidectomy with intraoperative findings of a globally hardened thyroid, showing a multinodular right lobe and an enlarged left lobe, with its inferior region located on the substernal region, strongly adherent to the trachea and esophagus with no evident cleavage plane. It was not possible to identify the left recurrent laryngeal nerve.

Macroscopically, the resected thyroid gland was enlarged and assymetrical, weighing 43.4 g, while measuring 5.9 × 5.3 × 4.7 cm. The specimen was serially sectioned, revealing extensive multinodular whitish areas with a fleshy and firm cut surface.

The histological examination (Fig. 2) revealed partial effacement of the thyroid parenchymal architecture by a population of round-to-oval lymphoid cells, with large and pleomorphic nuclei, coarse nuclear chromatin, visible nucleoli and scarse eosinophilic cytoplasm. Infiltration of the follicular epithelium, creating lymphoepithelial lesions, was noticed. The mitotic rate was 30 mitoses/10 HPFs, with atypical mitoses and foci of necrosis. Vascular invasion was seen, as well as infiltration of the surrounding fatty tissue and pre-thyroidal muscles. On the surrounding thyroid parenchyma,

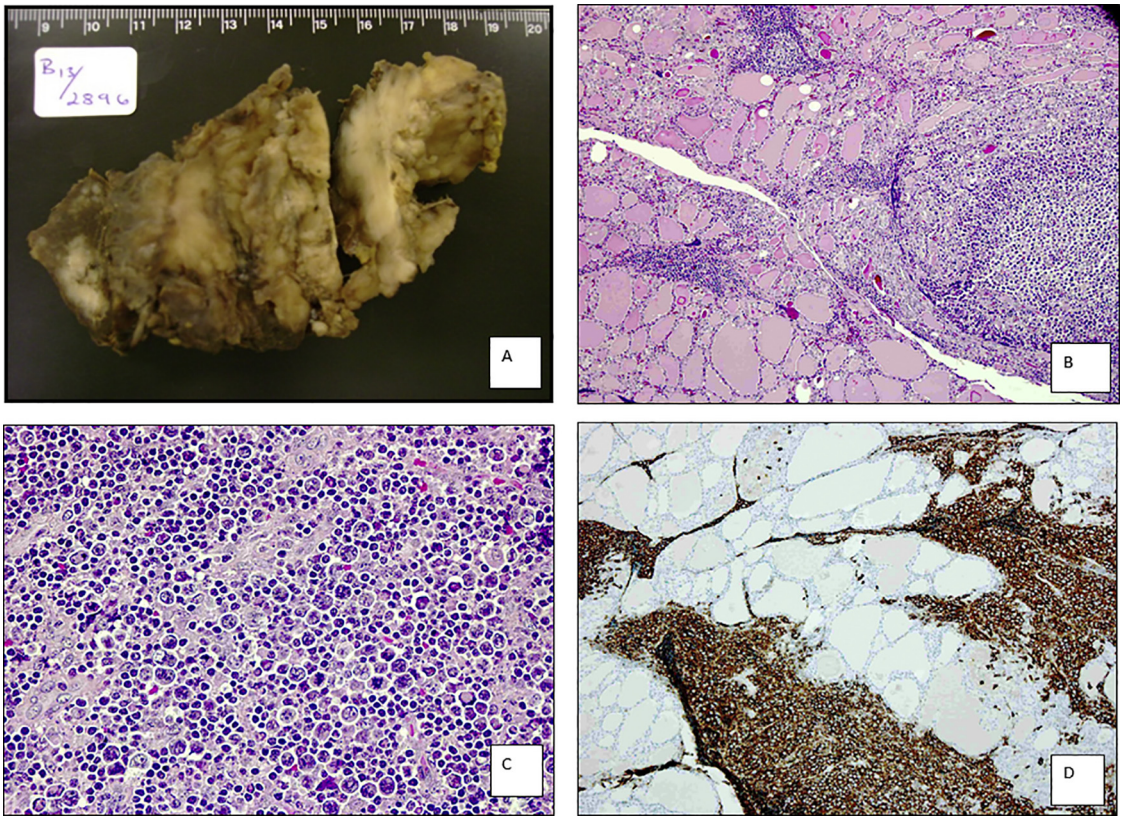

Fig. 2. Histological findings. A – Assymetrical thyroid gland, with a multinodular, whitish cut surface; B – Diffuse infiltration by large atypical lymphoid cells (H&E, ×40); C – Round-to-oval cells with high nuclear/cytoplasmic ratio, coarse chromatin and numerous mitoses (H&E, ×400); D – Malignant cells diffusely immunoreactive to CD 20 (×40).