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Retro - Laryngeal Ectopic Thyroid with Multinodular Goiter - Case Report

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Abstract: ***The ectopic thyroid is a situation different from the normal thyroid gland. The most frequent location of ectopic thyroid tissue is the base of the tongue, also being found in any part of the stretch (prelaryngeal, suprasternal, laryngotracheal, lateral cervical). Most of these cases are asymptomatic and its presentation is more common between the second and fifth decade of life, appearing on the lateral region as a non - painful motile mass that does not move with deglutition. Diagnosis in adults is done by a scintigraphy with Tc - 99m, I - 131 or I - 123 observing the presence or absence of the gland in its normal position and it helps differentiate other thyroid tissue migration disorders. In addition, complementary imaging scanning can be used as well as biopsy with histopathological study to determine lesion characteristics and extension to facilitate therapeutic plan. The treatment of choice is hormonal management, and the surgery treatment is kept for those ectopic tissues in which malignancy is suspected, non - controlled hyperthyroidism, local and/or respiratory symptoms, and for cosmetic reasons. Study, approach, and treatment of retrolaryngeal ectopic thyroid with multinodular goiter regarding a case.***

Keywords: thyroidectomy, goiter, ectopic

1. Introduction

The thyroid gland is the first endocrine gland to develop, it starts in the fourth week of embryonic development from the primitive endoderm, the medial portion from the first and second pharyngeal bursa, and the ventral portion from the fourth pharyngeal bursa. And they pass from the foramen cecum to their final position through the thyroglossal duct that obliterates by the end of the eighth week. This process is controlled by genetic factors like: thyroid transcription factors 1 and 2 (TTF1 y TTF 2), and paired box - 8 (PAX - 8). [1]

Abnormalities in the thyroid gland embryonic development are divided into aplasia, ectopy, hypoplasia, and hemiagenesis. Migrations disorders can be divided into thyroglossal cyst and/or ectopic thyroid. [2]

Ectopic thyroid is a situation of the thyroid gland different from normal. It is present in 1 out of 100, 000 to 300, 000 cases. With a reported incidence of 1 out of 4000 to 8000 patients with thyroid pathology.1 The most frequent location of ectopic thyroid tissue is in the base of the tongue, up to 90% of the cases (lingual thyroid), they can be found in any other part of the stretch (pre - laryngeal, suprasternal, laryngotracheal, cervical lateral), and it has been reported upon descent, being found thyroid tissue in the esophagus, mediastinum, heart, aorta, pancreas, gall bladder, skin, parotid, and liver.[1 - 8]

Most of the patients with lingual thyroid present hypothyroidism in absence of orthotopic tissue. Whereas patients with ectopic thyroid in lateral regions present a motile, unpainful lump, that does not move with deglutition, and it occurs more frequently in women and on the right side of the neck.[11, 12] [4]

It can coexist with a functional orthotopic thyroid for which euthyroidism will be found, but there are reported cases in which it is the only functional thyroid tissue.[12]

Most of the cases are asymptomatic and its occurrence is more frequent between the second and fifth decade of life, appearing in the lateral region as a motile, unpainful lump that does not move with deglutition. Its incidence is 4 times higher in women than in men.[11]

Diagnosis in adults is done by a scintigraphy with Tc - 99m, I - 131 or I - 123, observing the presence or absence of the gland in its normal position, and it helps differentiate thyroglossal cysts, since they are non - enhancing. In addition, complementary imaging methods can be used as well as histopathological analysis to determine characteristics and extension of the lesion to facilitate the therapeutic plan.[13]

The treatment of choice is thyroid hormone supplementation in cases of hypothyroidism, which can help decrease the size of the ectopic thyroids.[13]

Surgical treatment is reserved for those ectopic tissues in which malignancy is suspected, non - controlled hyperthyroidism, respiratory and/or local symptoms, and for cosmetic reasons.[4]

2. Material and Methods

General objective: to disclose the atypical presentation of the ectopic thyroid tissue as a transurgical finding.

Clinical report: female, 22 - year - old patient, who attends general surgery service due to an increase in volume at the cervical III level, it had previously been studied and operated due to suspected carotid glomus, found in cervical adenopathies with histopathological report of reactive mixed

lymphoid hyperplasia, obstructive or compressive symptoms are denied, there is only a tumor sensation that protrudes to the neck extension. Significant background is denied.

The physical examination evinces a movable, cylindrical neck, with cervical III level tumor with a diameter of approximately 1.5 cm, flat edges, well defined, not adhered to deep layers, associated adenopathies are not felt at touch, thyroid gland without abnormalities when palpated.

3. Discussion and Results

A neck ultrasound with high frequency linear transconductor is performed, which reports: normal dimensions thyroid gland, homogeneous echogenicity and echotexture, without nodule lesion evidence. In color Doppler ultrasound, normal vascularity is reported. Thyroid lobes with the following measurements: right 10 x 9 x 23 mm, left 13 x 8 x 22 mm, isthmus measures 2.5 mm, parotid and submaxillary glands with intact echogenicity and dimensions. Adenopathies in cervical ganglion chain are detected, which preserve fatty hilum, cortex less than 3 mm. By the right cervical chain at level III the presence of echogenic image is noted, with irregular edges, approximate dimensions of 3.4 x 1.6 x 1.9 cm, which is located medial in superior vena cava, at the application of the color Doppler technique, internal flow is observed.

Taking these findings into account, a contrast CT scan is done on the neck to delimit the extension of the lesion, and to determine a surgical approach plan, at the retropharyngeal level, at the height of the vertebral bodies C2 - C4, towards the right side a nodular lesion is evident, with hypodense, solid aspect, in simple phase, and homogeneous and avid enhancement in contrasted phases, similar to the thyroid enhancement, and with an extension towards the right thyroid lobe, it measures 35x25x15 mm in longitudinal sense, transverse, and anteroposterior, respectively, and the rest of the thyroid tissue shows adequate morphology and density. Abnormal enhancements or not identified. Larynx with a mild compression on the right side at the epiglottis level due to the described nodular lesion; leaving high suspicion of ectopic thyroid tissue.

Figure 1: Cervical CT scan where the right, solid aspect, nodular lesion at the level C2 to C4 at sections a) coronal b) sagittal c) axial is observed.

She is admitted to the operating room for anterior cervical examination; dissection was performed with active mobilization of the cervical plane and position change, exposing the lesion that was described above, which continues with the superior pole of the right thyroid lobe, right lobe without macroscopic abnormalities, therefore it was decided to only resect the ectopic tissue up to the right superior lobe, the procedure ends without any eventuality.

During follow up, the histopathologic result finally reported pyramidal right cervical tumor, 13 gr, with measurements of 5x2.5x2cm, capsular surface, brown color, rubbery consistency; negative for malignancy, follicular atrophy with consistent central predominance, with ectopic thyroid tissue, with multinodular goiter, with the presence of two Hürthle cell adenomas. Afterwards, adequate control of the thyroid function testing is detected, for which, follow up will be through outpatient service.

4. Conclusions

Ectopic thyroid can be present as a cervical lump along with or without other thyroid pathologies such as multinodular goiter or hormonal abnormalities, therefore, surgical treatment is effective as definite management, together with pertinent hormonal control and imaging scan for a diagnostic and therapeutic plan.

Conflict of interest:
No conflict of interest arose when making this article.

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