



Latero-cervical Thymic Cyst Diagnosed in Adulthood

Quieste tímico látero-cervical diagnosticado en la adultez

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ABSTRACT

Introduction: Cervical thymic cysts are a rare, benign and mostly asymptomatic lesions that are usually related to developmental malformations. In adults are extremely unusual and since first described by Lane in 1960, only about 36 cases have been published.

Objective: To present a case of latero-cervical thymic cyst diagnosed in adulthood.

Clinical case: A healthy 38-year-old female patient with an asymptomatic swelling neck mass of 2 years evolution. On physical examination she presented a right, mobile, not painful and extremely soft cervico-lateral mass of approximately 8 cm. The ultrasonographic characteristics showed an echo-lucent image measuring 14 x 8 cm. A surgical excision was performed and pathology reported a unilocular cervical thymic cyst.

Conclusions: This case is a rare one not only because the latero-cervical thymic cyst is an uncommon neck cyst, but also because it is not usually diagnosed in adult women.

Keywords: cysts; neck; thymus gland.



RESUMEN

Introducción: Los quistes tímicos cervicales son lesiones benignas, raras, generalmente asintomáticas y relacionadas con malformaciones del normal desarrollo embrionario. En adultos son extremadamente raras, y desde que se describieron por Lane en 1960 se han reportado alrededor de 36 casos.

Objetivo: Presentar un caso de quiste tímico cervico-lateral diagnosticado en la adultez.

Caso Clínico: Paciente femenina de 38 años y antecedentes de presentar una lesión tumoral del cuello de 2 años de evolución. Al examen físico presenta en la región lateral derecha del cuello un tumor móvil, no doloroso y suave de aproximadamente 8 cm de tamaño. Al ultrasonido presentaba una imagen ecolúcida de 14 x 8 cm. Se realizó resección quirúrgica de la lesión y anatomía patológica reportó un quiste tímico cervical unilocular.

Conclusiones: Este es un caso atípico no solo por el diagnóstico de quiste tímico cervico-lateral, sino también porque no es usual su presentación en pacientes femeninas.

Palabras clave: cuello; quiste; timo.

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INTRODUCTION

Cervical thymic cysts (CTC) are a rare, benign and mostly asymptomatic lesions that are usually related to developmental malformations.^(1,2) Those cervical cysts that appear at lateral areas are most commonly associated with defects in the normal changes of the pharyngeal pouches and branchial clefts, or secondary to metastatic malignant diseases.^(2,3,4)

The thymus is a highly active immunity organ located in the superior mediastinum behind the sternum, but after puberty it's gradually replaced by fatty tissue.^(5,6) It originates from the bilateral ventral wings of the third and fourth pharyngeal pouches and then migrates over the pyriform sinus, passes through the lateral part of the thyroid gland and descends to the mediastinum.^(1,2,5) Due to this embryological

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migration, ectopic thymic tissue may be present at any point along the path of descent; which describes a line between mandible bone to the sternum.^(2,5)

CTC are only 1% of all cervical cysts with less than 120 cases documented in the literature.^(1,2,3,5) In adults are extremely rare and since first described by Lane in 1960 about 36 cases have been published.^(1,4,5)

Several explanations for CTC pathogenesis have been proposed, but only two of these are accepted.⁽⁵⁾ The first one describes its development from ectopic remnants of thymic tissue due to secondary degenerative changes in Hassall's corpuscles that become an acquired multilocular CTC.^(2,4,6) The second one favors the origin from cystic degeneration of persistent thymo-pharyngeal duct which lead to a congenital unilocular thymic cyst.^(2,4,6)

This article aims to present a case of latero-cervical thymic cyst diagnosed in adulthood.

CLINICAL CASE

A healthy 38-year-old female patient with an asymptomatic swelling neck mass of 2 years evolution was received in General Surgery's consult complaining of an increase in the size of this lump. On physical examination she presented a right cervico-lateral mass of approximately 8 cm. It was mobile, not painful and with an extremely soft consistency (Fig. 1A). A neck ultrasound was performed (Fig. 1B), which reported in the right lateral neck area and supraclavicular region a large and echo-lucent image measuring 14 x 8 cm with close relation with the neck's vascular structures, although it seems to be independent of these. This image had thin walls and no vascular flow was seen at doppler examination.

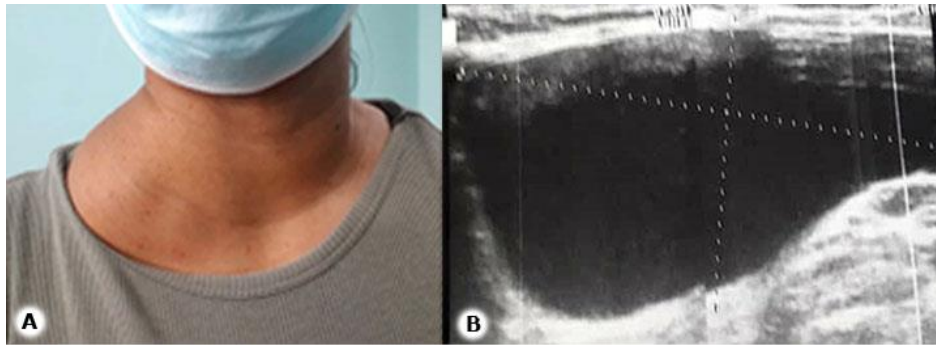


Fig. 1 - A-Right cervico-lateral mass of approximately 8 cm. B- Sonographic image.

The case was consulted with a multidisciplinary group and the consensus was to perform a surgical excision through a transversal incision initiating in the middle retro-sternocleidomastoid point and finishing in the supraclavicular area. The cyst was easily dissected from the surrounding tissue (Fig. 2).

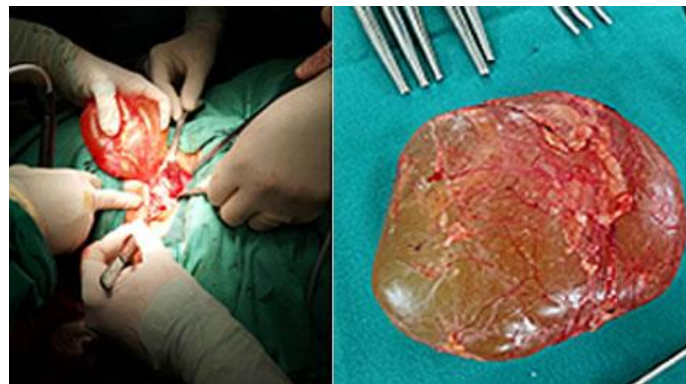


Fig. 2 - Surgical excision and anatomopathological piece.

The procedure was ambulatory and the patient was discharged the same day of surgery without complaining. Pathology reported a cyst formation with histopathological characteristics compatible with a unilocular cervical thymic cyst. In a follow-up consult two months later, the patient presented a total healing scar (Fig. 3) and she referred being satisfied with the outcome of surgery.



Fig. 3 - Final outcome of surgery, 2 months later.

COMMENTS

The clinical presentation of CTC is mostly asymptomatic, but some patients complain of a painless neck swelling or lump.^(2,5,6) This neck lump consistently grows and eventually reaches a size between 1-26 cm in a time period of less than 1 month to several years.^(2,3,5) Should the swelling grow fast, this is typically due to an infection.⁽⁶⁾

About 6–13% of all cases reported some symptoms, such as: respiratory distress, dysphagia, and hoarseness secondary to cyst abutment against local structures.^(4,5) Most adult CTCs present on the left side of the neck, and the average age of presentation is 36 years.^(2,5)

In adults, CTCs are typically misdiagnosed preoperatively as another cystic neck pathology.^(2,5) The differentials of cervical cystic neck masses are dermoid cyst, epidermoid cyst, thyroglossal duct cyst, laryngocele, hemangioma, bronchogenic cyst, thyroid lesions, cervical lymphadenopathy, rarely parathyroid cysts and malignancies.^(2,5)

Preoperative diagnosis of a CTC is challenging and there are no accepted radiologic criteria to identify these lesions; however, the most frequent imaging modalities used are: neck ultrasound (US), computed tomography scan (CT) and magnetic resonance imaging (MRI).^(4,5) The US is used to differentiate cystic and solid masses, CTC are usually hypoechoic with few septa, internal echoes and poorly vascularized.^(5,6) CT scan reveals mostly non-enhancing, soft, uniloculated or multiloculated masses with clearer delineation of the surrounding structures and mediastinal extension.^(4,5) Contrast-enhanced CT

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delineates the cyst more clearly and determines its relationship with other anatomical landmarks, such as carotid artery, for precise preoperative planning.^(5,6) The MRI shows T2-hyperintensity, T1-homogenous intensity, and no enhancement.⁽⁵⁾

Fine-needle aspiration has not useful value to diagnose CTC, but it is helpful to rule out cystic neck malignancies.^(5,6)

Surgical excision is performed for diagnostic purposes as well as the treatment technique.^(2,5) Surgery is often accomplished through a transverse or vertical neck incision, but a sternotomy may be required if there is a thoracic extension of the lesion.^(4,5) The cyst contents may have varied gross appearance from clear, serous to brownish fluid.^(2,6) Although the treatment of choice for these lesions is surgical, under appropriate circumstances, observation and sclerotherapy can also be considered as reasonable courses of action.⁽⁴⁾ Definitive diagnosis depends on histologic analysis of the excised specimen.⁽⁴⁾

The postoperative follow-up range in the review literature went from weeks to 1 year, without recurrence after total surgical excision.^(3,5) Malignant degeneration of CTC are uncommon, but it can mutate to squamous cell carcinoma cases and basaloid thymus carcinoma.^(4,5)

This case is a rare one not only because the latero-cervical thymic cyst is an uncommon neck cyst, but also because it is not usually diagnosed in adult women.

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Conflict of interest

The authors declare that there are no conflicts of interest. The authors declare that no funding was received for this case.

Data availability

The data used for this case presentation corresponds to: Instituto de Medicina Tropical: Pedro Kourí.