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Cervical Lymphoepithelial Cyst: A Case Report

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Abstract | **Case Report**

Lymphoepithelial cysts are rare congenital malformations caused by abnormal development of the second branchial cleft. The diagnosis is confusing with several other etiologies given the localization. We report the case of a 17-year-old patient with a lymphoepithelial cyst, giving us the opportunity to review its clinical and anatomical features, diagnostic methods and treatment options.

Keywords: Cyst - cervical - lymphoepithelial.

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INTRODUCTION

Lymphoepithelial cysts, also known as gill cysts or benign cystic ganglia, are rare congenital malformations resulting from abnormal embryonic development in the cervical region [1]. They account for around 2% of all laterocervical tumours, and represent between 6.1% and 85.2% of malformations of the second branchial cleft [2].

We present the case of a 17-year-old patient admitted to our department for the management of a lymphoepithelial cyst.

This case offered us the opportunity to carry out an in-depth analysis of the anatomo-clinical features of this type of cyst, and to explore recommended diagnostic and therapeutic modalities.

CASE REPORT

Mr C.O, aged 17, admitted to our department for management of a right laterocervical swelling. He had no history of tuberculosis, no drug allergies, no psychosocial problems and no family history of genetic disease.

The mass appeared for the first time 6 months ago and grew slowly without any sign of infection in the head and neck region. On clinical examination, the patient was apyretic, hemodynamically and respiratorily stable.

Palpation revealed a mobile, fluctuating mass in the right cervical region, approximately 5 cm in long axis. There were no clinical signs of sinus or fistulous tract.

Cervical CT showed a well-defined cystic lesion exerting a mass effect on the jugulocarotid axis. (figure 1) (figure2) The patient underwent a right cervicotomy with complete resection of the cyst. (figure 3) Dissection of the mass was performed step by step, respecting the vascular axis of the neck During the operation, no tract or cord connecting the cyst to the pharynx was noted.

The mass was dissected step by step, respecting the vascular axis of the neck. During the operation, no tract or cord connecting the cyst to the pharynx was found. Post-operative management was straightforward. The patient adhered well to the treatment received, with good tolerance of surgery and post-operative care, including antibiotics. Histological examination confirmed the diagnosis of lymphoepithelial cyst. Follow-up was essentially clinical, with good improvement and no recurrence.

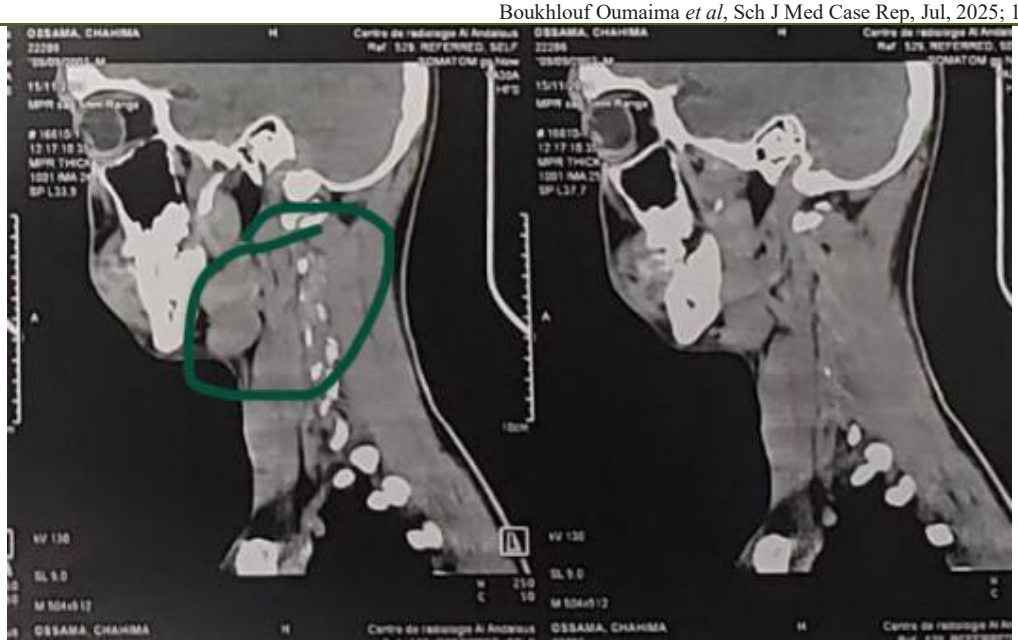

Figure 1: Cervicofacial CT sagittal sections in parenchymal windows showing the laterocervical mass

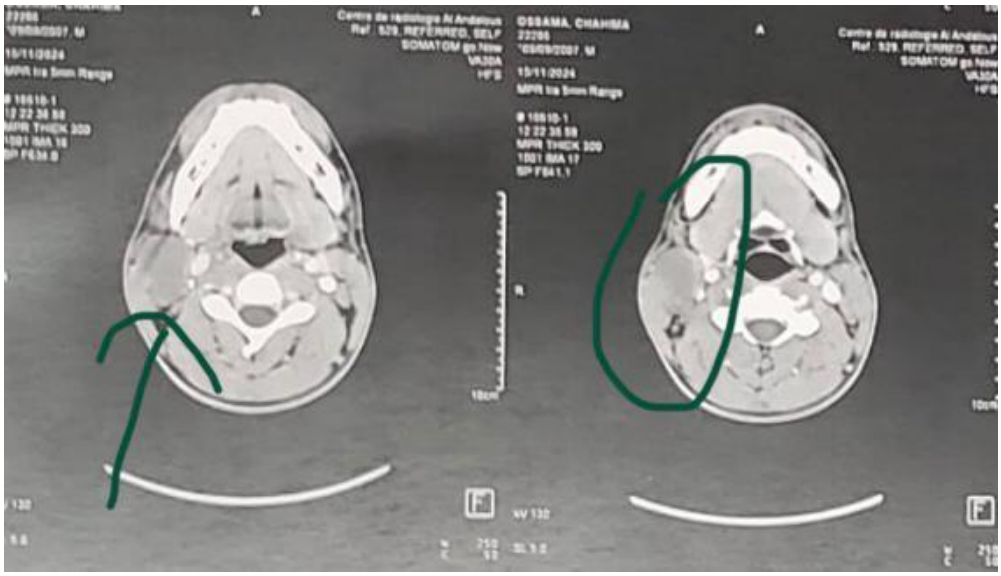

Figure 2: Axial sections of the cervico-facial CT scan in parenchymal windows showing the latero-cervical mass

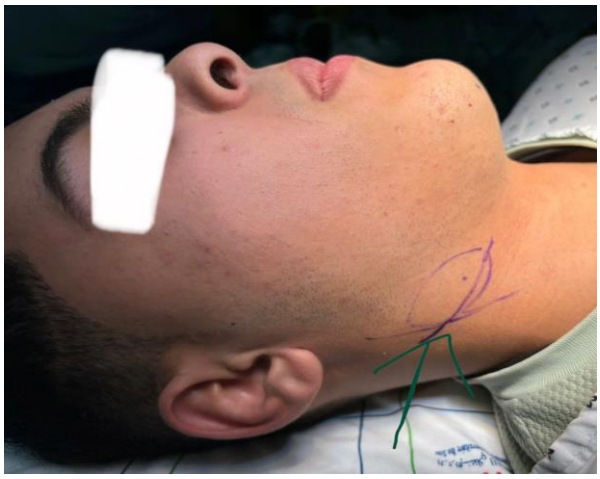

Figure 3: image showing mass and cervical approach

DISCUSSION

Lymphoepithelial cysts are rare embryological anomalies that are often misdiagnosed [2, 4]. These formations appear as a result of faulty resorption of the second branchial cleft, and classically occur in the anterolateral regions of the neck. Although congenital in origin, they generally remain asymptomatic until adulthood, with frequent discovery between the second and fourth decades of life, often during an increase in volume or an infectious episode [2, 7].

In our patient, the swelling did not appear until the age of 17, when it progressively increased in volume, preceded by repeated episodes of ENT infections. Clinically, these cysts present as soft, mobile swellings near the carotid bifurcation, usually without associated systemic symptoms [4, 5]. In some cases, they may communicate with the skin or pharynx, forming external or internal fistulas [2, 6].

Depending on their anatomical extension, local symptoms such as dysphagia, dysphonia, dyspnoea or stridor may appear [7]. In our case, the swelling was isolated, with no associated signs, the oropharynx was unobstructed and no fistulization to the skin was observed. Diagnosis is based primarily on clinical examination and imaging. Ultrasound is the first-line examination, due to its accessibility and safety. However, in the case of large masses, CT and MRI are recommended to determine the extent of the lesion [2, 6]. MRI offers better soft-tissue characterization and can differentiate lymphoepithelial cysts from other parapharyngeal lesions such as hemangiomas, dermoid cysts, lymphangiomas and metastatic adenopathies [6, 8,12]. In the presence of a fistula, fistulography remains a valuable examination for visualizing the fistulous path [8, 13].

Bailey's (1929) classification of cysts into four types according to depth and anatomical relationship [11]:
Type I: A cyst located deep in the sternocleidomastoid muscle, but lateral to the carotid artery. It is more superficial than the other types.
Type II: This is the most frequent type. The cyst is located between the carotid vessels (carotid artery and internal jugular vein), behind the sternocleidomastoid muscle.
Type III: The cyst is medial to the internal carotid artery and may extend into the lateral wall of the pharynx.
Type IV: Very deep, located in the pharyngolaryngeal region, near the base of the skull.

In our patient, it was a type I cyst, corresponding to sector IIb, deep in the sternocleidomastoid muscle.

Diagnostic confirmation is based on histological examination. Fine needle aspiration can be a useful preoperative adjunct, revealing features such as the presence of keratinized squamous epithelial cells and a background of amorphous debris [9]. Histologically, the cyst is lined by squamous or ciliated columnar epithelium, with underlying lymphoid tissue frequently containing germinal centers [2, 10, 15].

Although malignant degeneration is exceptional, infection is the most frequent complication [19,16, 17]. Therapeutic management therefore relies on complete surgical excision, ideally performed early to prevent complications. The procedure involves cervicotomy under general anaesthesia, with careful dissection of any fistulous pathways, in order to limit the risk of recurrence, estimated at between 3% and 4% after primary surgery [20,21]. Alternative treatments, such as percutaneous sclerotherapy, remain experimental [18].

In our patient, we opted for surgical management with complete removal of the cyst under general anaesthesia. There were no post-operative complications or recurrences.

CONCLUSION

The common clinical presentation of lymphoepithelial cysts with other cervical pathologies sometimes makes their diagnosis difficult. Treatment is essentially surgical, and must be undertaken early to limit the risk of inflammatory evolution secondary to infectious episodes. Early and complete excision guarantees a favorable prognosis with a minimal recurrence rate, thus ensuring optimal patient care.

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