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Cervical Lymphoepithelial Cyst in a Healthy Adolescent Male: A Rare Benign Entity Mimicking Lymphadenopathy

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Abstract **Case Report**

We report the case of a 17-year-old male presenting with a right-sided cervical swelling evolving over three months. Clinical examination revealed a firm, mobile mass without skin changes or systemic symptoms. Cervical ultrasound suggested a lateral cervical lymphadenopathy in level IIa. No CT or MRI was performed, and the remainder of the ENT evaluation was normal. Surgical excision under general anesthesia was performed, and histopathological analysis confirmed a lymphoepithelial cyst. Follow-up at 2 months, 6 months, and 1 year showed no recurrence. This case highlights the importance of considering benign cystic lesions in the differential diagnosis of cervical masses in young patients, and reinforces the role of surgical excision for both diagnosis and cure.

Keywords: Lymphoepithelial cyst; Cervical mass; Adolescent; Differential diagnosis; Surgical excision.

INTRODUCTION

Cervical lymphoepithelial cysts (CLECs), also referred to as branchial cleft cysts, are benign congenital lesions that arise from epithelial inclusions within lymphoid tissue or remnants of the branchial apparatus [1]. They typically present as painless, slow-growing masses in the lateral neck, most commonly in the second to fourth decades of life [2]. However, their occurrence in adolescents is less frequently reported, making such cases valuable for clinical documentation.

The differential diagnosis of lateral cervical masses is broad and includes infectious lymphadenitis, tuberculous adenitis, lymphoma, metastatic lymphadenopathy, and congenital anomalies such as thyroglossal duct cysts or dermoid cysts [3][4]. Misdiagnosis can lead to unnecessary investigations or delayed treatment. Imaging modalities such as ultrasound, CT, and MRI play a crucial role in narrowing the differential, but definitive diagnosis relies on histopathological examination [5].

CLECs are usually located in level II of the neck and may mimic lymphadenopathy due to their echogenic profile and anatomical position [6]. Although benign, their potential to be mistaken for malignant lesions underscores the importance of surgical excision and histological confirmation. This case report aims to highlight the clinical presentation, diagnostic approach, and management of a CLEC in a healthy adolescent male, and to compare it with existing literature.

CASE REPORT

A 17-year-old male with no significant medical history presented with a right-sided cervical swelling evolving over three months. The mass was painless, with no associated fever, weight loss, or general health deterioration. Clinical examination revealed a firm, mobile mass in the right lateral neck, with intact overlying skin and no signs of inflammation. [Figure 1]

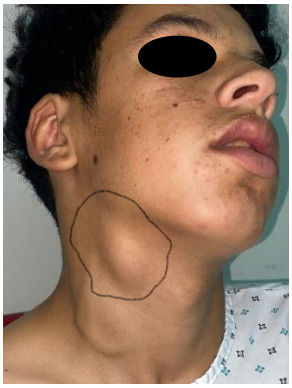

Figure 1: Preoperative image showing the right cervical swelling

Cervical ultrasound showed a well-defined, hypoechoic, round lesion measuring 22 × 28 mm in level IIa, suggestive of a lateral cervical lymphadenopathy. No CT or MRI was performed due to the benign clinical context. The remainder of the ENT evaluation, including nasopharyngoscopy, was unremarkable.

Surgical excision of the mass was performed under general anesthesia. [Figure 3]

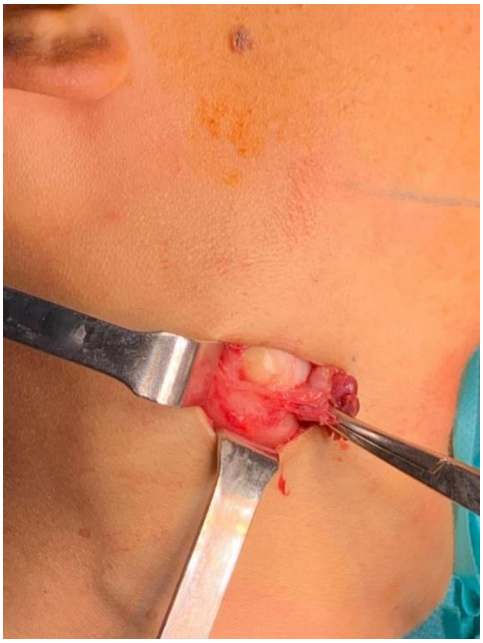

Figure 2: Intraoperative view during surgical excision of the mass

The specimen was sent for histopathological analysis, which revealed a cyst lined by squamous epithelium surrounded by lymphoid tissue, consistent with a lymphoepithelial cyst. Postoperative recovery was uneventful.

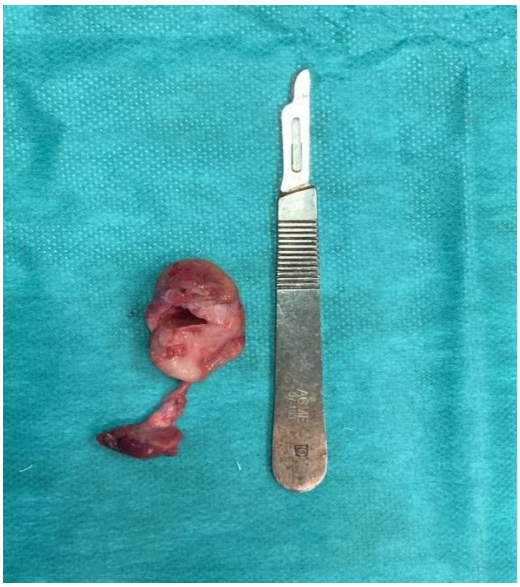

Figure 3: Macroscopic appearance of the excised cyst

Follow-up at 2 months, 6 months, and 1 year showed no recurrence. [Figure 4]

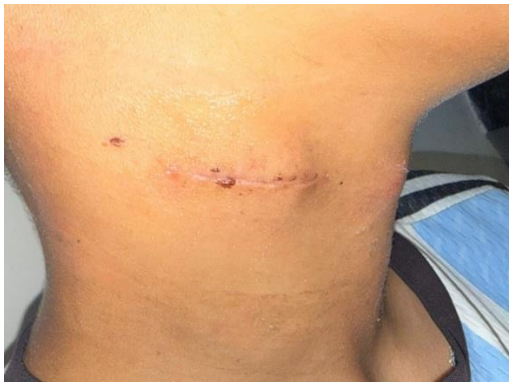

Figure 4: Postoperative image of the patient

DISCUSSION

Lymphoepithelial cysts are rare benign lesions that typically arise in the lateral neck, often near the angle of the mandible. They are believed to originate either from branchial cleft remnants or from epithelial inclusions within cervical lymph nodes [7].

The second branchial cleft is the most common origin, accounting for over 90% of cases [8].

In adolescents, CLECs are uncommon and may be misinterpreted as reactive lymphadenopathy or neoplastic processes. The absence of systemic symptoms and the benign imaging features in our case supported a non-malignant etiology. However, the firm consistency and location warranted surgical exploration to exclude malignancy.

Ultrasound is a valuable first-line tool, especially in young patients, due to its non-invasive nature and ability to differentiate cystic from solid lesions [9]. CT and MRI can provide further anatomical detail, particularly in cases with deep extension or atypical features [10]. In our case, the ultrasound findings were sufficient to guide management.

Histologically, CLECs are characterized by a cystic cavity lined with stratified squamous or respiratory epithelium, surrounded by lymphoid tissue with germinal centers [11]. This histological profile helps distinguish CLECs from other cystic neck lesions such as dermoid cysts or cystic metastases.

Surgical excision remains the gold standard for both diagnosis and treatment. Complete removal prevents recurrence and allows for definitive histological analysis [12]. Incomplete excision may lead to recurrence, although this is rare in well-circumscribed lesions [13].

Some studies have reported associations between CLECs and HIV infection, particularly in the

parotid region, but cervical CLECs in immunocompetent patients remain a distinct entity [14]. Our patient was healthy, seronegative, and had no underlying immunodeficiency.

Compared to similar cases in the literature, our patient's presentation was typical in terms of location and imaging features but notable for his young age and absence of comorbidities. The long-term follow-up without recurrence further supports the efficacy of surgical excision in such cases [15].

Conclusion

Cervical lymphoepithelial cysts, though rare in adolescents, should be considered in the differential diagnosis of lateral neck masses. Clinical examination and ultrasound can guide initial management, but definitive diagnosis requires histopathological analysis. Surgical excision offers both diagnostic clarity and curative treatment. Long-term follow-up is essential to monitor for recurrence, although outcomes are generally favorable. This case reinforces the importance of maintaining a broad differential diagnosis and highlights the value of early surgical intervention in ambiguous cervical masses.

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