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Cervical Cystic Lymphangioma in an Adult: A Case Report

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Abstract | **Case Report**

Cystic lymphangioma (CL) or cystic hygroma is a rare benign lymphatic malformation typically observed in children. Adult presentation is extremely uncommon and often leads to diagnostic difficulties. The head and neck region is the most common site of occurrence, although CL can be present elsewhere in the body including the axilla, mediastinum, groin, and retroperitoneum. Though rare in adults with only a few cases reported in the literature, cystic lymphangiomas should be included in the differential diagnosis of neck masses. Imaging is key to preoperative assessment, while surgical resection remains the cornerstone of treatment. We report a case of a 66-year-old male presented a cervical cystic lymphangioma, and discuss the presentation, diagnosis and management of this pathology.

Keywords: Cystic Lymphangioma, Lymphatic Malformation, Adult, Cervical Mass, Case Report.

INTRODUCTION

Cystic lymphangiomas, are rare benign tumors of lymphatic origin, most often diagnosed in early childhood, with more than 90% of cases presenting before the age of two [1]. They typically occur in the cervicofacial region and represent congenital malformations due to lymphatic sequestration during embryonic development [2]. Adult-onset cases are extremely rare, and their diagnosis may be delayed due to their atypical presentation and the broad differential diagnosis in this age group [3]. We report a rare case of cervical cystic lymphangioma in a 66-year-old adult, with a focus on the clinical presentation, imaging findings, surgical management, and histological confirmation.

CASE REPORT

A 66-year-old male, chronic smoker, with no previous medical, no surgical or trauma history, presented with a slowgrowing painless mass in the left lower lateral cervical area since 2 years. The swelling was insidious in onset, the patient reported mild discomfort in the neck, particularly during movement, with no systemic symptoms such as fever, weight loss, dyspnea, or dysphagia.

On physical examination, a soft, fluctuant, and well-defined swelling was in the left supraclavicular area (figure 1). The mass was non-tender and mobile relative to the superficial planes. The overlying skin was normal, without redness, signs of inflammation, or regional lymphadenopathy. Neurological and vascular examinations were normal.

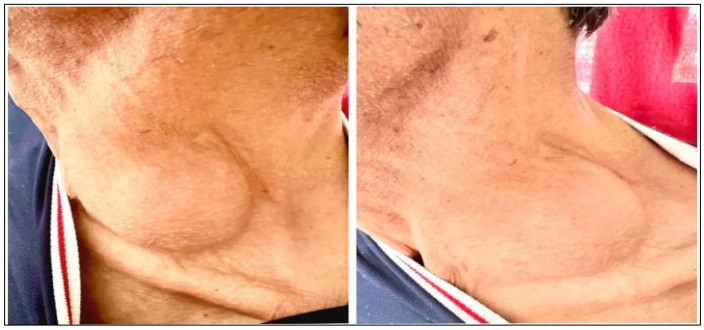

Figure 1: Clinical appearance of the cervical mass.

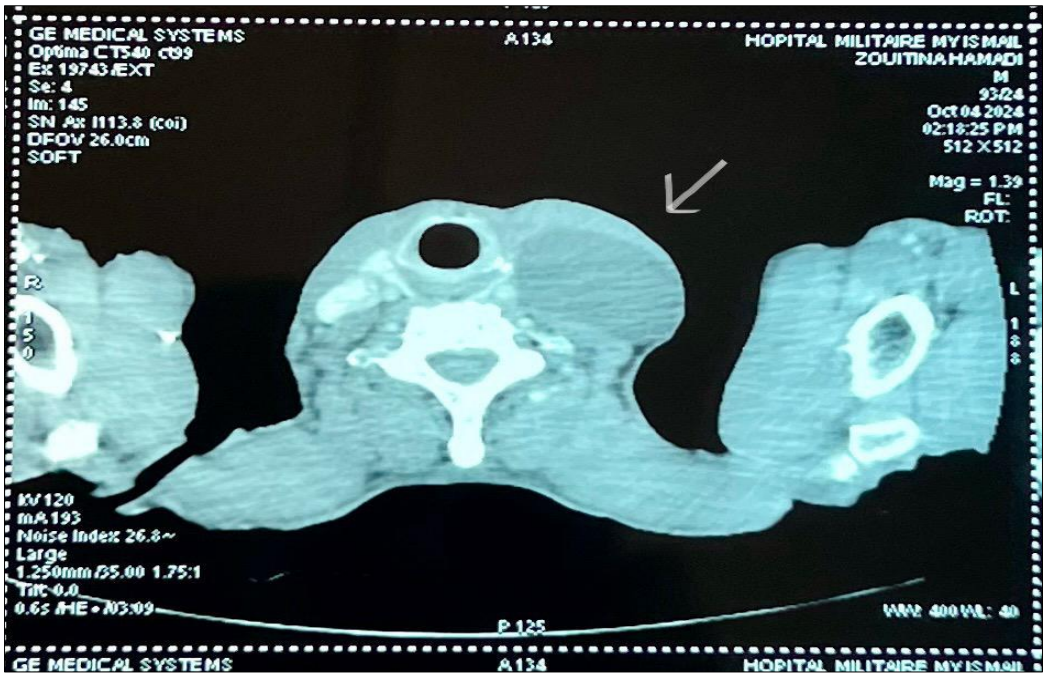

Figure 2: axial CT section showing a uni-loculated cystic lesion in the left subclavicular region extending to the left deep cervical spaces

CT scan of the neck showed a uniloculated homogeneous cystic lesion located in the left subclavicular region measured approximately 65 × 40 × 60 mm, underneath an elevated sternocleidomastoid muscle. The left jugular vein, while relatively compressed, was still patent. There was no contrast enhancement after intravenous injection (figure 2). MRI confirmed a non-enhancing, fluid-filled lesion with thin septations, with no signs of invasion into adjacent structures (Figure 3). These radiological features were suggestive of a cystic lymphangioma.

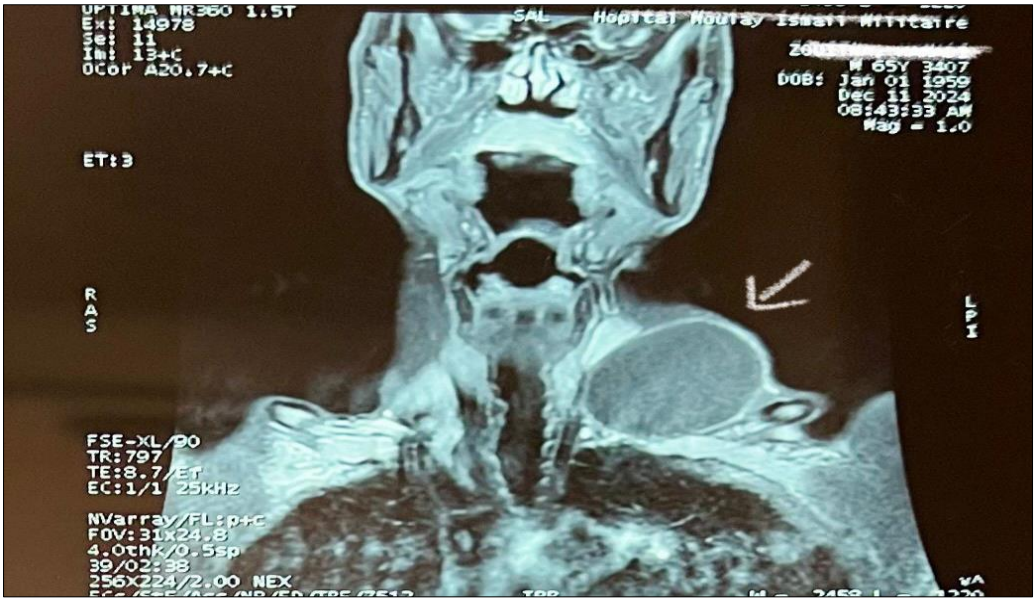

Figure 3: Coronal MRI view demonstrating a uniloculated cystic lesion located in the left subclavicular region

Surgical excision was planned and carried out under general anesthesia. Intraoperatively, the lesion appeared as a well-encapsulated, translucent, cystic mass filled with clear fluid, with a prominent vascularization, characteristic of benign lymphatic malformations (Figure 4). Careful dissection allowed for complete resection without rupture or damage to surrounding tissues.

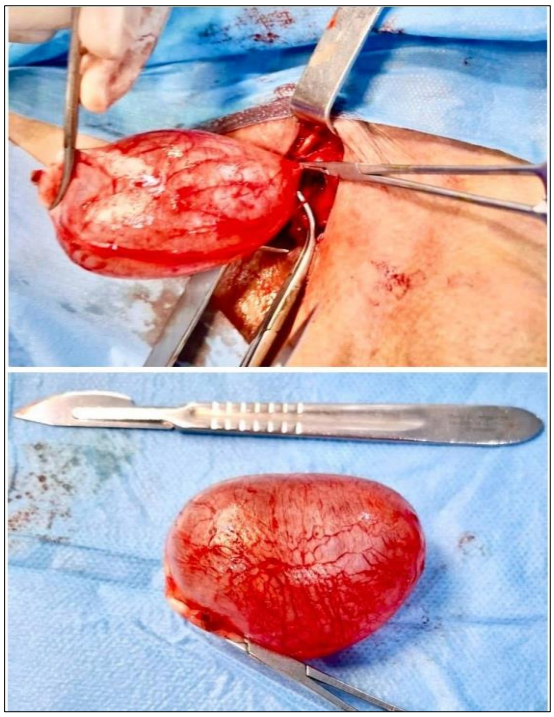

Figure 4: Intraoperative image showing the excised cystic lymphangioma.

The patient's postoperative course was uneventful. No recurrence was observed during the follow-up period.

Histological examination revealed large dilated lymphatic channels lined by flattened endothelial cells within a fibrous stroma, with scattered lymphoid aggregates. These findings were consistent with cystic lymphangioma (figure 5).

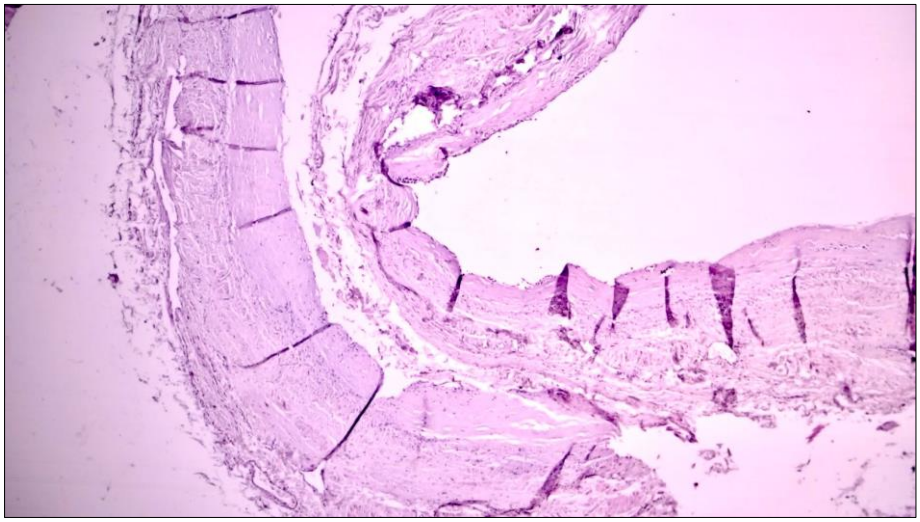

Figure 5: Histopathological features of cystic lymphangioma with dilated lymphatic channels lined by endothelial cells (H&E)

DISCUSSION

Cystic lymphangiomas are developmental anomalies of the lymphatic system, with the latter being the most common in the cervical region [1, 2]. Three theories have been proposed to explain the origin of this abnormality: Blockage or arrest of normal growth of the primitive lymph channels occurs during embryogenesis, primitive lymphatic sac does not reach the venous system, during embryogenesis, lymphatic tissue lays in the wrong area. While usually congenital, the pathophysiology of adult cystic lymphangiomas is not clearly understood, but these lesions may occur secondary to induction of dormant rests of embryonic lymphatic tissue that are stimulated to differentiate and grow [4, 5].

The differential diagnosis of a cystic neck mass in an adult includes branchial cleft cysts, thyroglossal duct cysts, dermoid cysts, necrotic metastatic nodes (especially in chronic smokers), lipomas, and neurogenic tumors [6]. Imaging plays a key role in preoperative assessment. CT and MRI are complementary tools: CT is helpful in assessing lesion density and calcifications, whereas MRI provides superior soft tissue contrast and clearer delineation of cystic content [7].

Histopathology remains the gold standard for definitive diagnosis [8], Microscopically, CLs are characterized by ectatic and dilated lymphatic spaces lined by an attenuated endothelium. Some of lumina contain lymph fluid.

Complete surgical resection is the mainstay of treatment and is preferred in adult patients, offering both diagnostic confirmation and curative potential [1]. Recurrence rates are low when excision is complete. In selected cases, especially in pediatric or inoperable lesions, other treatment methods may be considered include sclerotherapy using OK-432 (Picibanil), radiotherapy, laser therapy, electrocoagulation, and cryotherapy, used either alone or in combination with surgery in the treatment of large, complex lesions [9].

This case underscores the need for clinicians to include cystic lymphangioma in the differential diagnosis of neck masses, even in older adults, to allow for timely and appropriate management.

CONCLUSION

Cystic lymphangioma, although extremely rare in adults, should not be overlooked in the assessment of cervical masses. Imaging aids in preoperative planning, but definitive diagnosis requires histopathological confirmation. Complete surgical excision remains the treatment of choice, with low morbidity and excellent prognosis.

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