

# When a Child's Disease Strikes an Adult: A Diagnostic Conundrum of Cervical Lymphangioma

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**Abstract:** ***Introduction:** Lymphangiomas are benign lymphatic malformations that predominantly affect children. However, rare cases can present in adults. Approximately 90% of lymphangiomas occur in pediatric patients less than 2 years of age. Adult lymphangiomas remain a rare clinical entity With less than 150 cases documented in literature. **Case report:** A 18 year old male presented with right sided neck swelling for 3 years. Clinical examination revealed a solitary cystic oval swelling present near the right lateral aspect of neck medial to the sternocleidomastoid muscle which was brilliantly trans - illuminant. Contrast - enhanced computed tomography scan of neck showed features suggestive of Lymphangioma of size 8.9 x 4.5 x 4.1 cm located in the Right Infra hyoid part of neck in the inter muscular plane. Intra - operatively a cystic swelling arising from level 3 cervical lymphatics was noted compressing Right internal jugular vein. Complete excision of the cystic lesion, including the cyst wall, was achieved. The postoperative course was uneventful and the patient was discharged on Post operative day 5. Histopathology confirmed the diagnosis of lymphangioma and the patient remains healthy at 1 year of follow - up. **Conclusion:** This case report highlights the importance of considering Lymphangioma in the differential diagnosis of neck masses, even in adult patients. Early diagnosis and appropriate surgical intervention can lead to successful outcomes and prevent complications.*

**Keywords:** lymphangioma, neck swelling, adult presentation, surgical intervention, differential diagnosis, Sclerotherapy, Cystic Lymphangioma, Lymphatic Malformation, Cervical, Macrocytic, Cavernous, OK - 432 (Picibanil), Bleomycin, CaseReport, Lymphatics, Sclerotherapy, Surgical Excision, Microcystic, Adolescent, Right Infrahyoid Neck, Intraoperative Findings, Complete Excision, Benign, Lymphatic Channels

## 1. Introduction

Lymphangiomas are congenital, benign swellings derived from lymphatic malformations, characterised by the abnormal proliferation and dilation of lymphatic vessels. During embryonic development, lymphatic vessels sprout from veins and form a complex network. Lymphangiomas arise when these lymphatic channels fail to connect correctly or when there is an abnormal budding of lymphatic tissue. This disruption leads to the formation of cystic spaces filled with lymphatic fluid.

Approximately 90% of lymphangiomas occur in paediatric patients less than 2 years of age.

They most commonly occur in the neck, but may also present in the axilla, mediastinum, groin and abdominal organs. Adult lymphangiomas remain a rare clinical entity with less than 150 cases documented in literature. Risk factors such as

cervical infection, neck trauma, prior surgeries may contribute to the proliferation of Lymphangioma in adults.

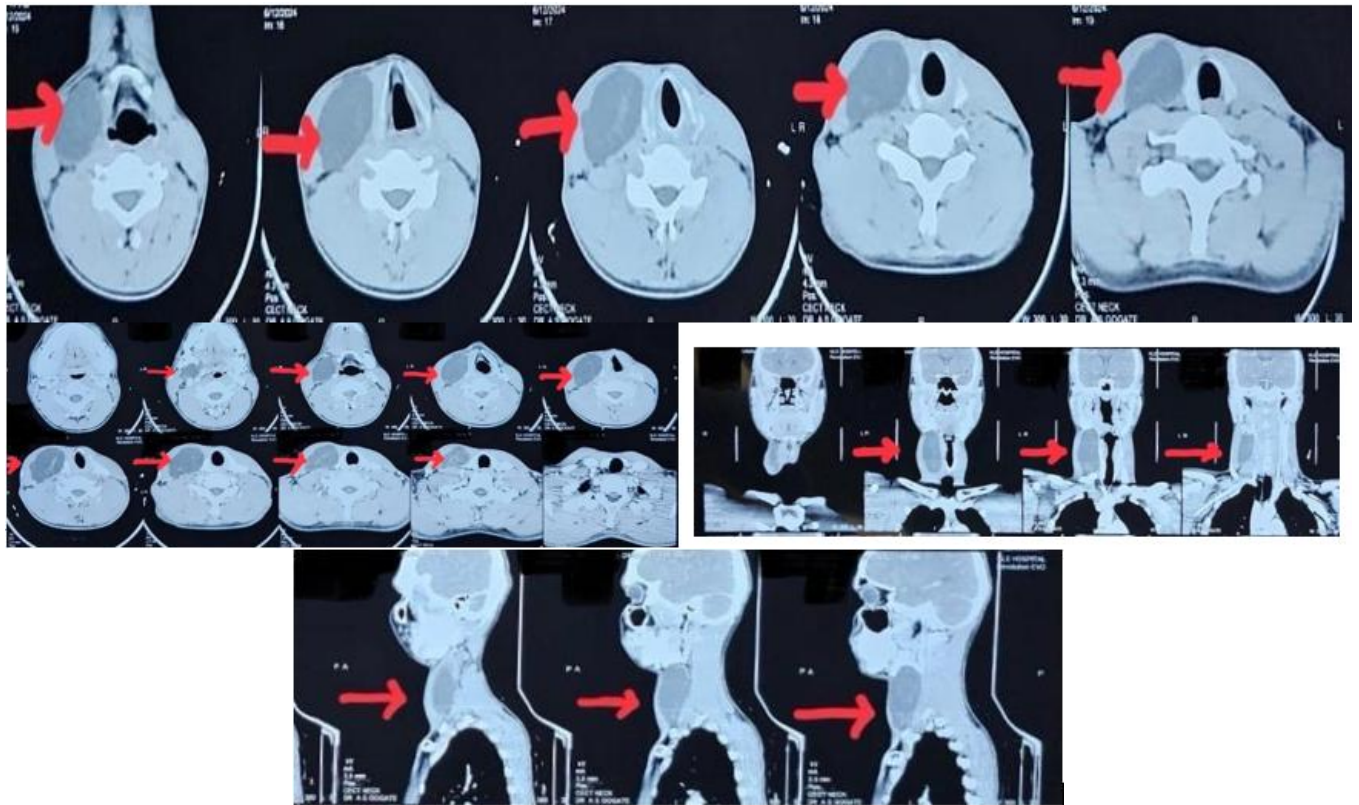
## 2. Case Report

A 18 year old male with no co - morbidities presented with Right sided neck swelling since 3 years.

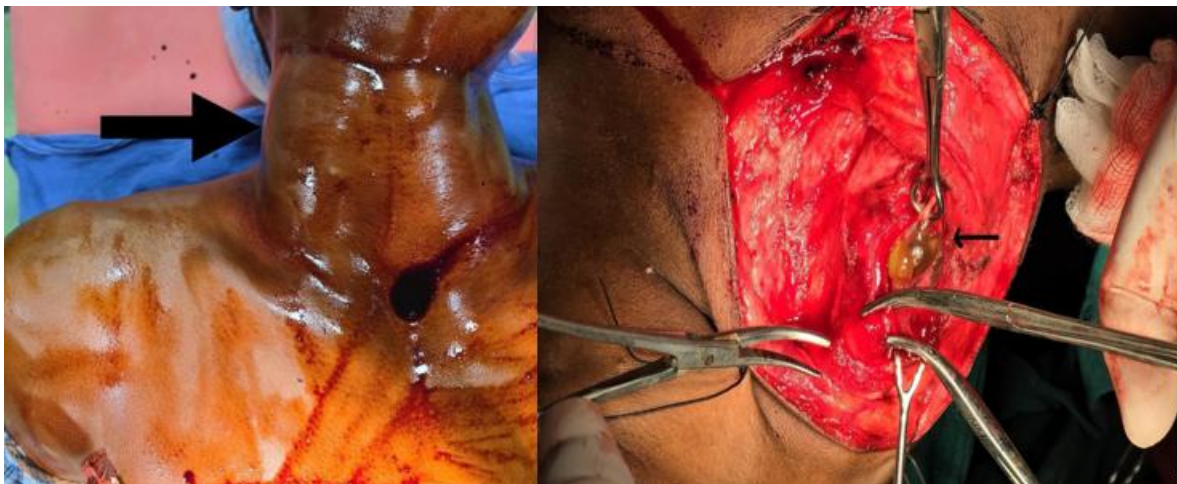
Clinical examination revealed a solitary, oval, non tender, cystic swelling present near the right lateral aspect of neck medial to the sternocleidomastoid muscle which was brilliantly trans - illuminant with right carotid pulsation displaced upwards.

## 3. Investigations

Contrast - enhanced CT Scan of Neck showed features suggestive of Lymphangioma of size 8.9 x 4.5 x 4.1 cm located in the Right Infra hyoid part of neck in the inter muscular plane.



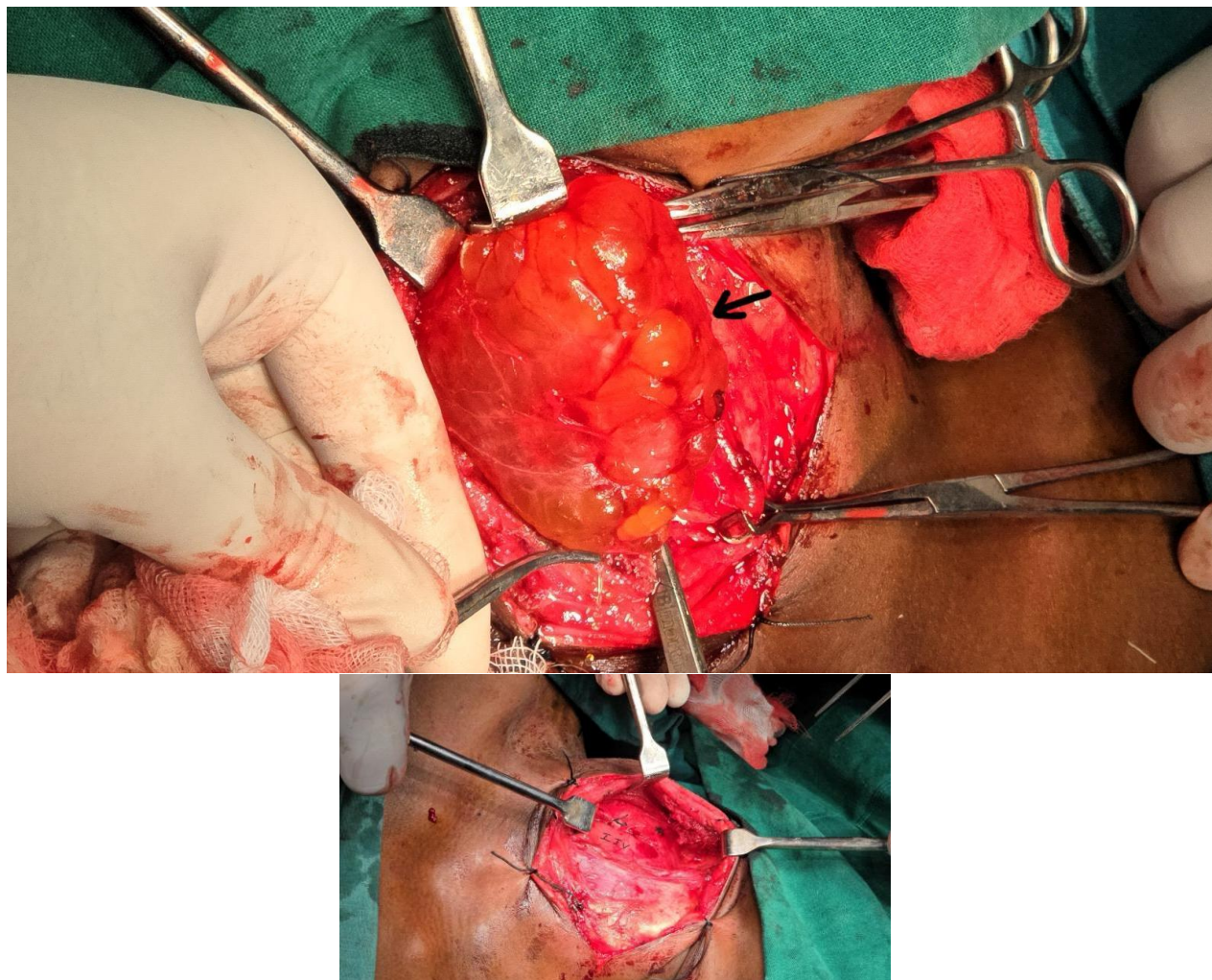
**Intra operative Findings**



A cystic swelling arising from level 3 cervical lymphatics was noted compressing Right internal jugular vein.

Complete excision of the cystic lesion, including the cyst wall, was done.





The postoperative course was uneventful. The patient was discharged on post operative day 5.

**Histopathology**

Specimen: Cyst from Neck

Gross - Irregular grey brown cystic soft tissue piece measuring 5 x 1.5 x 1 cm

External surface - Irregular, soft in consistency

Cut surface - Grey white area seen

Microscopy - Sections studied show thin walled dilated Lymphatic channels with intraluminal proteinaceous material. The surrounding stroma shows chronic inflammatory infiltrate along with aggregation of lymphocytes

Impression: Cyst from Neck (Excised) - Features **suggestive of Lymphangioma**

**4. Discussion**

Lymphangiomas: Vascular malformations primarily occurring in the neck, children under 2 years of age account for 90% of cases. Routine Prenatal and Postnatal imaging contributes to high rate of diagnosis.

They are often asymptomatic, but can cause difficulty breathing or swallowing, pain and obstruction in other areas. Adult Lymphangioma is of rare occurrence and very less understood entity. Factors such as Neck Trauma, cervical inflammation, Prior neck surgeries are potential triggers for the development or exacerbation of Lymphangioma

**Classification**

1) Histological Classification

Capillary Lymphangiomas (Simple Lymphangiomas)	Cavernous Lymphangiomas:	Cystic Lymphangiomas (Cystic Hygromas)	Hemangiolympangioma
Composed of small, capillary - sized lymphatic vessels	Characterized by dilated lymphatic channels	Consist of large, macroscopic cysts filled with lymphatic fluid	This type shows a mixture of lymphatic vessel abnormalities and blood vessel abnormalities
Typically located in the superficial layers of the skin or mucous membranes	Tend to infiltrate deeper tissues	Often found in the neck region.	

## 2) Classification Based on Cyst Size:

Microcystic Lymphangiomas	Macrocystic Lymphangioma	Mixed Lymphangiomas
Composed of cysts measuring less than a certain size. (cysts less than 2 cm <sup>3</sup> ).	(cysts larger than 2 cm <sup>3</sup> )	Display a combination of microcystic and macrocystic features.

**Management**

- **Surgical Excision:** Complete surgical removal is the ideal treatment, but it can be challenging due to the infiltrative nature of lymphangiomas and carries risks of recurrence and injury to surrounding vital structures which can result in Lethal comorbidities
- **Sclerotherapy:** Injection of sclerosing agents into the lymphatic cysts to induce fibrosis and shrinkage using drugs like OK - 432 (Picibanil) and Bleomycin. Shows comparable or better efficacy than surgery in some cases.

**Laser Therapy: Used for superficial lesions.**

- **Observation:** In some cases, particularly for asymptomatic lesions, observation may be appropriate and Recurrence is possible, even after complete surgical excision.

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**5. Conclusion**

This report emphasizes that lymphangiomas should be considered as a differential diagnosis in the evaluation of neck masses, even in adolescent populations. While lymphangiomas are relatively well - documented in children, their occurrence in adults is a rare phenomenon. The location Where a lymphangioma develops is crucial because it directly impacts the risks it poses, particularly the danger of blocked airways, which can be fatal. While the direct malignant transformation of a lymphangioma is exceedingly rare, the presence of chronic lymphedema, which can be associated with lymphangiomas, increases the risk of lymphangiosarcoma. Early diagnosis, coupled with expert surgical management, optimizes patient outcomes by minimizing the risk of damage to critical anatomical structures and preventing recurrence.

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