

(CASE REPORT)



A rare case of paediatric mediastinal lymphoma of thymic origin

Vijaya Kumari M, Dhinesh Ram and Athukuri Ravi Teja *

Osmania Medical College, Hyderabad, India.

Open Access Research Journal of Multidisciplinary Studies, 2021, 02(01), 038–041

Publication history: Received on 25 August 2021; revised on 15 October 2021; accepted on 17 October 2021

Article DOI: <https://doi.org/10.53022/oarjms.2021.2.1.0037>

Abstract

Lymphoma is one of the most common anterior mediastinal tumors among pediatric age group accounting for 13% of all paediatric malignancies. Lymphoma of thymic origin is considered as rare entity. We present the case of 13 yr old girl presented with symptoms of worsening dyspnoea and cough. Biochemical parameters revealed elevated WBC, lymphocytes. Patient was followed up with chest xray, ultrasound, CT and findings were consistent with lymphoma of thymic origin. Ultrasound demonstration of fat echogenic content in lesion provides clue towards thymic origin of lesion.

Keywords: Pediatric; Anterior mediastinal mass; Lymphoma; Thymic origin

1. Introduction

Mediastinal Hodgkin lymphoma contributes for about 30% of all lymphoma [1]. Diagnosis of lymphoma of thymic origin is challenging considering the low incidence of such malignancy. Mediastinal involvement can occur as involvement secondary to systemic lymphoma or as an primary mediastinal lymphoma [2]. Early detection of lymphoma is important as they are commonly associated with encasement of infiltration of adjacent major vessels, pericardium, pleura [2]. Considering the fact that prognosis of thymic lymphoma depends on early detection, imaging studies play a significant role [3].

2. Case report

11 yr old female presented to OPD with complaints of chest pain, dyspnoea with Cough for 20 days with h/o weight loss. No h/o fever/exposure to tb Contact, recent travel/immunization. On clinical examination multiple level enlarged cervical lymph nodes noted with splenomegaly. Blood investigations revealed elevated wbc (25,000) and lymphocytes (29%) with reduced hb (8g/dl), platelet (60,000), elevated ESR-72mmhr.

* Corresponding author: Athukuri Ravi Teja
Osmania Medical College, Hyderabad, India.

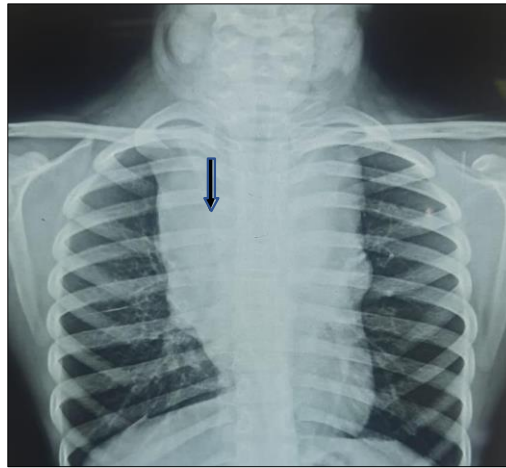


Figure 1 FRONTAL CHEST X-RAY-Widened mediastinum with soft tissue opacity (black arrow) noted within.It obscures normal silhouette of right heart border,svc.Silhouette of aortic arch is maintained.Hilar vessels can be seen through the lesion. Superiorly lesion is seen extending to thoracic outlet with obscuration of border-S/O-Anterior Mediastinal mass

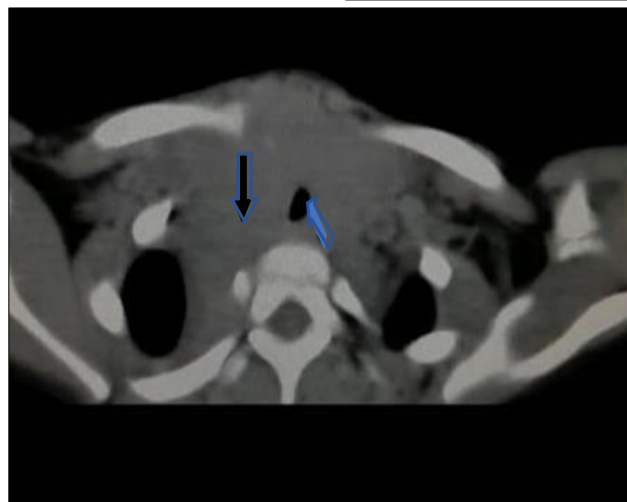
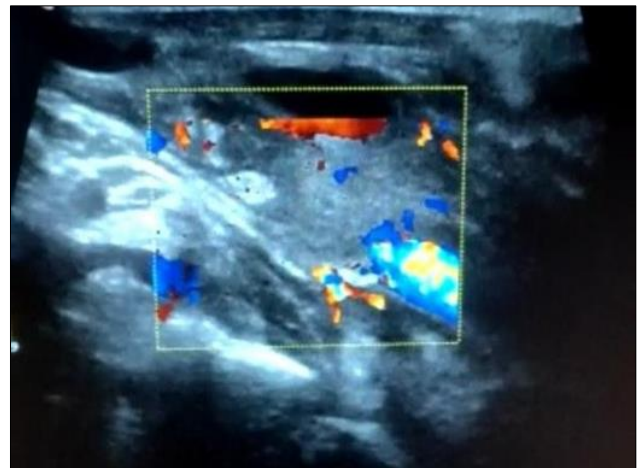


Figure 2(a-c)- USG shows ill-defined mixed echogenic lesion (blue arrow) noted with areas of hyperechogenicity(fat) noted within in neck with extension into retrosternal space(in figure 2c) lesion shows vascularity on Doppler

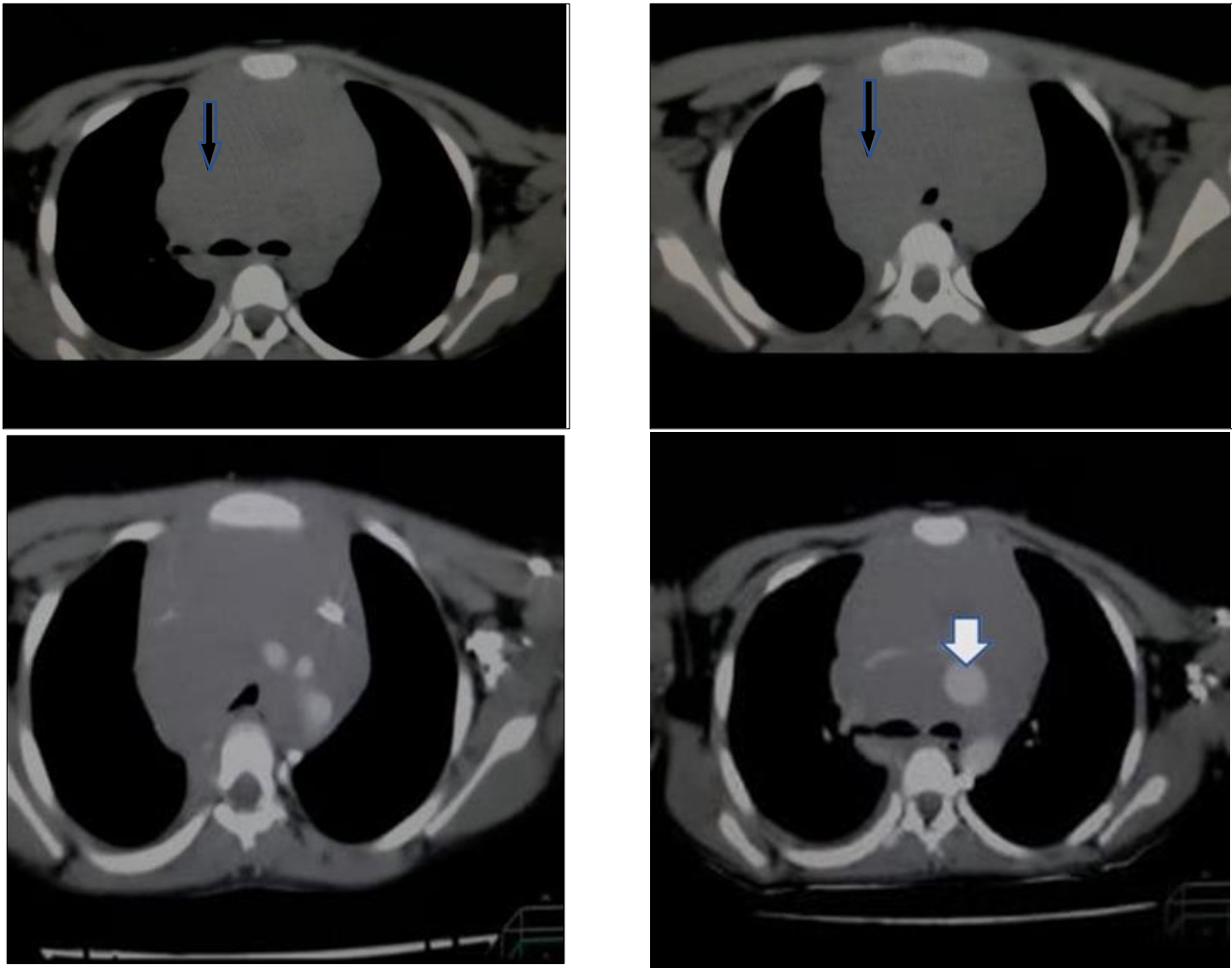


Figure 3(a-d)-AXIAL NON-CONTRAST IMAGES-Homogenous soft tissue density mass(black arrow) occupying anterior mediastinal with areas of hypodense cystic areas noted within. Inferiorly lesion is seen extending into middle mediastinum and involving pre-tracheal space and inseparable from anterior pericardium. Lesion causes compression and narrowing of trachea (blue arrow) and bilateral main bronchus. Superiorly lesion is seen extending above thoracic out let into neck.Thymus not seen saperatly. No enlarged lymphnodes in axilla.



Figure 4a Saggital non-contrast image(mediastinal window) shows homogenous soft tissue density lesion(black arrow) noted involving anterior mediastinum occupying retrosternal space

3. Case discussion

Based on cross sectional imaging International Thymic Malignancy Interest Group classified mediastinum into 3 compartments namely prevascular, visceral and para- vertebral [1]. Anterior mediastinal tumour contribute for 50% of all mediastinal tumours. Common anterior mediastinal tumours include teratoma, thymoma, lymphoma, thyroid lesions among which lymphoma contribute for 50% tumours in children^{1,2}. Primary mediastinal lymphoma (20%) can be Hodgkin or non-Hodgkin and usually arise either from thymus (8%) or lymph node^{2,3}. Systemic Hodgkin disease has bi-modal age distribution while Hodgkin lymphoma of thymic origin presents among second to third decade of life [3]. Clinically patients with Hodgkin of thymic origin presents with symptoms of cough, dyspnea and manifests when there is extra-thymic extension [3].

3.1. Role of imaging

X-RAY-Helps in localization of mediastinal tumor, anterior mediastinal tumors show silhouette with right heart border, ascending aorta. Lymphoma appears as soft tissue opacity obscuring anterior mediastinal structures [4].

Anterior mediastinal lymphoma appears as diffuse homogenous mass of conglomerate nodal lesions causing mass effect on adjacent structures (trachea, vascular structure) with involvement of anterior and posterior nodal chains in paediatric patients. Areas of necrosis, haemorrhage uncommon⁵. Imaging differentials for mass confined to anterior mediastinum showing continuation with thymus include thymoma, seminoma [5,6].

4. Conclusion

Radiological evaluation can help in narrowing down the differentials of anterior mediastinal mass and presence of hyperechoic fatty component of lymphoma in ultrasound can help in identification of origin of the lesion, as in our case of thymic origin.

Compliance with ethical standards

Acknowledgments

The authors gratefully acknowledge the contribution of co-radiologists without whose efforts this work would not have been possible.

Disclosure of conflict of interest

No disclosure.

Statement of informed consent

Informed consent was obtained from the participant included in the study.

References

- [1] Radiologic and pathologic correlation of anterior mediastinal lesions L Azour, AL Moreira, SL Washer, JP Ko - 2020 .
- [2] Primary Mediastinal Lymphoma (Thymic): A Case Report. Bustamante S., Viveros J., Camargo D., Piedrahita A., Polo J., Carrillo J.
- [3] Primary thymic Hodgkin's lymphoma: A rare mediastinal mass A Ayadi-Kaddour, M Mlika, H Djilani... - Respiratory Medicine. 2008.
- [4] Carter BW, Okumura M, Detterbeck FC, Marom EM. Approaching the Patient with an Anterior Mediastinal Mass: A Guide for Radiologists. Journal of Thoracic Oncology. 2014; 9(9): S110–S118.
- [5] Arora M, Thakker V, Rathod K, Rana S, Patel R. Imaging in a Case of Extensive Paediatric Mediastinal Lymphoma Presenting as Haemothorax. JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH. Published. 2019.
- [6] Juanpere S, Cañete N, Ortuño P, Martínez S, Sanchez G, Bernado L. A diagnostic approach to the mediastinal masses. Insights into Imaging. 2012; 4(1): 29–52.