

LIPOSARCOMA OF ANTERIOR MEDIASTIUM, A RARE CASE WITH LITERATURE REVIEW

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PJR April - June 2018; 28(2): 168-170

ABSTRACT

Among all mediastinal tumours, liposarcomas are very rare with a very low incidence of about 1%. They usually presents late as they are asymptomatic and acquire a large size due to pleural space and elasticity of lungs. We presents a case of 45 yr old male patient with a large mediastinal liposarcoma extending into both hemithoraces on CT scan. He presented with left sided chest pain, dyspnea and mild fever since 01 month.

Key words: Anterior mediastinum, liposarcoma, rare lesion, chest X-ray, CT scan.

Introduction

Liposarcomas are rare neoplasms originated from the primitive mesenchymal cells, accounting for 15-20% of all the soft tissue sarcomas. They are commonly seen in the extremities, retroperitoneum and vulva. Primary liposarcoma of the mediastinum is one of very rare location, and they are seen as less than 1% among all the mediastinal tumors. Mediastinal liposarcomas are commonly localized in anterior mediastinum and mostly reported to originate from the thymus related fatty tissue.¹⁻³ We report a very rare location of liposarcoma in anterior medaistium extending into both hemithoraces in a 45 year old patient.

Case Report

A 45 year old male patient presented to radiology department civil hospital, Karachi for chest X-ray with progressive dyspnea during exertion, non productive cough, left sided chest pain for one month. Had past history of smoking since 20 years. No history of

hemoptysis or any comorbidity. His general physical examination and vitals were normal. His routine hematological and biochemical investigations were within normal limits.

His chest X-ray PA view showed well defined opaque mass in left lower zone silhouetting left heart border and left hemidiaphragm, it is extending into left superior mediastinum and hilar vessels can be seen through it. (Fig-1a). Subsequently his contrast enhanced CT scan chest was done which revealed a large heterogeneously enhancing fat attenuated (-70 to -110 HU) mass lesion in anterior mediastinum which extends into left hemithorax causing ipsilateral left lower lobe and lingular segment atelectasis. It measures 20.9 x 18.0 x 16.8 cm. Mass also extending into right hemithorax through invasion of right mediastinal pleura and extending into superior mediastinum involving origin of great vessels. Inferiorly it was involving left hemidiaphragm, focally upper pole of spleen and fundus of stomach. No chest wall invasion noted. (Fig, 1b-d)

He was referred to thoracic surgery department for further management. Surgery was done and mass

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Submitted 2 January 2018, Accepted 6 February 2018

was excised. He was also given adjuvant chemotherapy. Biopsy confirmed adipose tissue lesion with evidence of malignancy.

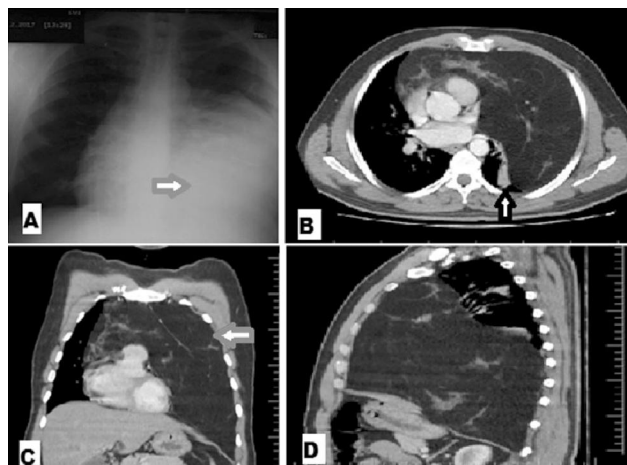


Figure 1: A: chest xray PA view shows opaque left mid and lower zone (arrow), B-D: Contrast enhanced CT scan in various planes shows a heterogenous fat attenuated lesion in anterior mediastinum (Gray arrow) extending into hemithoraces with atelectasis (black arrow) of left lower lobe and lingular segment.

Discussion

Liposarcomas are one of the most common subtypes of adult soft tissue sarcomas. However they are rarely found in the mediastinum.⁴ According to statistics reported by Kashu et al, the most common sites of these tumors are the lower extremities (75%) and the retroperitoneum (20%). He reported a case of large mediastinal liposarcoma that was successfully treated with radical resection. Thus far less than 130 cases of mediastinal liposarcoma have been reported in the published literature.⁵

Mediastinal liposarcomas are very slow growing tumors, which extend into the pleural spaces or compress the contiguous structures, including the esophagus, lung, superior vena cava and pericardium or asymptomatic with the diagnosis made after the detection of a mass on chest radiography performed for other reasons.⁶

Histologically Primary liposarcomas are divided into 5 sub-types: well-differentiated, myxoid type, round-cell, pleomorphic and mixed cell type. Of these sub-types, myxoid type is the most common liposarcoma (40-50%).⁷

Although definitive diagnosis made by histopathology,

however various imaging modalities including X-ray, CT and MRI play important role in diagnosing mediastinal liposarcoma. On MRI, T1-weighted images reveal the fatty tissue with high signal intensity, whereas in T2-weighted images, the signal intensity diminishes.⁸


There are various treatment options available for mediastinal liposarcoma which includes radiotherapy, chemotherapy and surgery. Overall surgery remains the most effective treatment. For unresectable tumour radiofrequency ablation and adjuvant chemotherapy plays a role.⁹

Conclusion

In conclusion, we present a rare case of liposarcoma arising from the anterior mediastinum in a 45-year-old man. Multislice CT scan is an effective guide in establishing diagnosis, defining its extent, involvement of other mediastinal structures and useful in deciding treatment options.

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