

Case Report

# Mediastinal Lipomatosis Presenting as Right Lower Lobe Lung Collapse

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## ABSTRACT

Mediastinal lipomatosis is a benign condition characterized by deposition of abnormal amount of normal unencapsulated fat in the mediastinum. Usually, it presents as mediastinal widening on a chest radiograph with no pertinent symptoms. We present a symptomatic case of mediastinal lipomatosis who presented radiologically as right lower lobe segmental lung collapse

**Keywords:** mediastinal lipomatosis, lung collapse, mediastinal widening.

## INTRODUCTION

Mediastinal lipomatosis, as a distinct clinical entity, has been known since more than 5 decades when it was seen in patients with Cushing's syndrome (primary or iatrogenic).<sup>[1]</sup> This abnormal adipose tissue accumulation presents as mediastinal widening on chest x-ray which, due to lack of awareness, can easily be confused with malignant pathologies of mediastinum. In view of rising incidence of obesity and increased steroids use, the chance of detecting this condition is likely to increase. We present a case with unusual presentation of mediastinal lipomatosis which also seemed to contribute to persistent breathlessness in the patient.

## CASE REPORT

A 46-year-old non-obese male with uncontrolled bronchial asthma presented for routine checkup. He was breathless despite maximum medication. He had history of multiple short courses of oral steroids for his symptoms over the last 2 years. Routine hematological investigations including total serum IgE levels were within normal limits.

Chest radiograph showed opacity in right lower zone, suggestive of right lower lobe collapse. (Fig. 1) After checking treatment compliance, inhaler technique, evaluating drug history and ruling out persistent allergen exposure, fiberoptic bronchoscopy was performed which yielded patent airways. Contrast enhanced computed tomography (CECT) of thorax revealed large, homogenous mass with a density in range of fat surrounding the pericardium laterally on the right side. (Fig. 2-4)



Figure 1: X-ray chest P-A view shows a opacity in right lower zone adjoining the mediastinum

It was pushing the heart to opposite side as well as causing segmental collapse of the right lower lobe. (Fig. 3) This picture was consistent with mediastinal lipomatosis.

In view of no other identifiable cause, mediastinal lipomatosis was thought to be a possible factor contributing to persistent breathlessness in the patient.

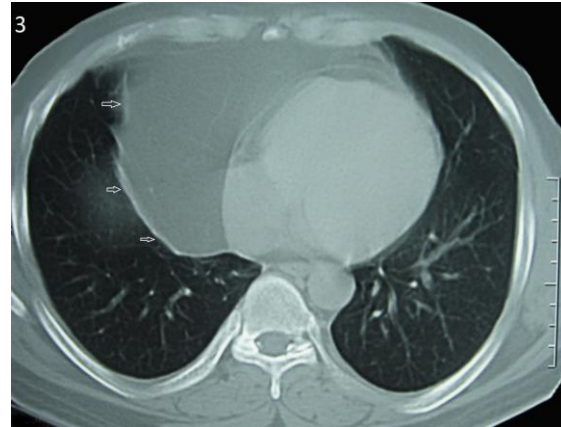
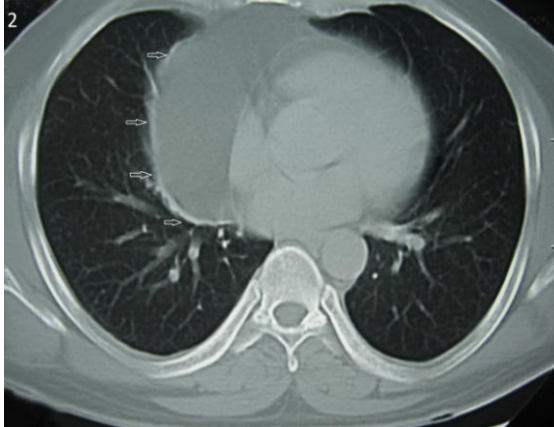


Figure 2 & 3: CECT thorax (lung window) showing right side paracardiac mediastinal fat deposition (white arrows) causing contralateral cardiac shift

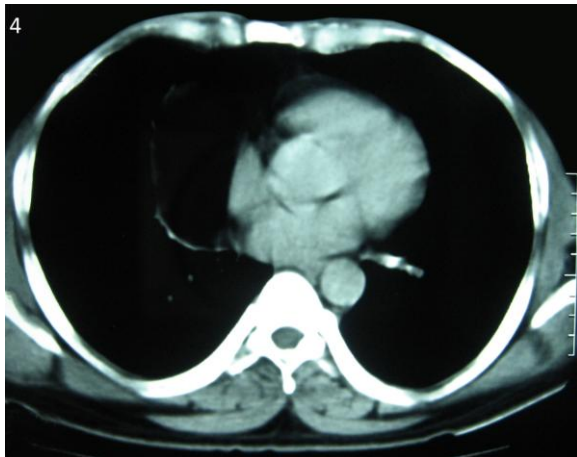


Figure 4: CECT thorax (mediastinal window) showing a line of demarcation between the aerated lung and adjoining lipomatosis

## DISCUSSION

Mediastinal structures are normally surrounded by small amount of adipose tissue. Mediastinal lipomatosis is a condition in which there is increased accumulation of the normal unencapsulated fat in the mediastinum distorting its silhouette to variable extent. [2] It develops either due to some underlying factors like obesity, Cushing's syndrome, diabetes or steroid use or may be idiopathic in nature. [3-6] The present patient had a history of repeated steroid use which might have played a role in disease causation.

Mediastinal lipomatosis is commonly seen in the superior mediastinum

presenting as mediastinal widening on X-ray. It can easily be confused with other causes of mediastinal widening like lymphoma, lung cancer, thymoma, aneurysms of great vessels, mediastinitis etc. [3] However, in the present case lipomatosis occupied inferior mediastinum and presented as right lower lobe segmental collapse which is relatively a rare presentation.

Usually asymptomatic, this abnormal fat deposition can rarely cause cough or respiratory distress due to pressure symptoms on the major airways. [7,8] The present patient also had persisting breathlessness despite on maximum asthma treatment which led us to think mediastinal lipomatosis as a potential causative factor.

Contrast enhanced CT scan thorax is helpful in not only making a definitive diagnosis of mediastinal lipomatosis but also defines the extent of the fatty growth. It has obviated the need for diagnostic biopsy. [9] There is no specific treatment for mediastinal lipomatosis. Generally, asymptomatic cases don't require treatment except serial monitoring. Weight reduction in obese and tapering of corticosteroids is advised in patients with significant involvement or having symptoms associated with lipomatosis. [7] In rare situations,

surgery may be required to relieve disabling breathlessness. [2]

The present case describes an unusual presentation of mediastinal lipomatosis as well as highlights the need to be aware of this condition while managing patients with mediastinal pathology. Timely detection of this condition may prevent from unnecessary invading testing for suspected mediastinal tumor.

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