

## CASE REPORT

# Giant Lipoma chest extending into the thoracic cavity – unique entity: a case report

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### ABSTRACT

**Background:** Lipomas are most frequent benign soft tissue tumours with incidence of about 6%. For giant lipoma, chest wall is the rare site. Extension in the thoracic cavity is unique. No case of chest wall lipoma with extension in thoracic cavity is reported.

**Case presentation:** We report a rare case of left anterior chest wall lipoma in 45 year old man for 15 years. It had extension in the thoracic cavity. On CT scan, its size was 145mm × 132mm × 90mm and in the chest cavity it was 119mm × 60mm × 72mm size. Patient had minimum symptoms. Core biopsy confirmed the benign nature. Surgical excision under GA was done. Recovery was uneventful. Histopathology report confirmed as “Giant Lipoma”.

**Conclusion:** Giant lipoma of the anterior chest with extension into thoracic cavity is a rare presentation. Even with such large size, they can give minimum symptoms. Proper pre-operative assessment of such large lesions is very important for proper management.

**Keywords:** Giant Lipoma, chest wall, benign tumour, case report

### Background

Lipoma is the most common of all soft tissue tumours and can involve any part of the body [1,2,3]. It is of mesenchymal origin and composed of adipose tissue. Lipomas are usually asymptomatic. Symptoms can only occur when they are situated in cavities or limited spaces leading to localized pressure symptoms or pain due to stretching of nerves. Lipoma is only defined as “Giant Lipoma” when its size is more than 10 cm or its weight is of more than 1 Kg [2]. Giant lipomas are rarely seen over the chest wall [4,5]. As most of lipomas are asymptomatic, patient usually present late to physicians. Here we report a case of giant lipoma of chest extending into the thorax that developed over a span of 15 years.

### Case presentation

A 45 year old male visited out-patients department with a large lump in front of left chest. Apparently, it was extending

upward into the neck. It progressively enlarged in a span of last 15 years. The mass was initially slow growing and painless. During last two years, it started growing rapidly. Patient also complained of slight pain in the neck region and dyspnoea. On examination, it was a soft mobile mass in front of left chest extending upward into the neck, posterior to the left clavicle. There was no bruit. Regional lymph nodes were not enlarged. Breath sounds were decreased in the upper part of left chest. On Ultrasound (USG), it was a multi-septate echogenic lesion with sparse vascularity on colour doppler. X Ray chest (PA view) revealed a soft tissue mass occupying middle and upper part of left chest (figure 1). Computed Tomography (CT) scan showed a 145mm × 32mm × 190mm hypodense lesion with few calcifications and septations. In the left chest, it was extending from upper to mid chest cavity. It was

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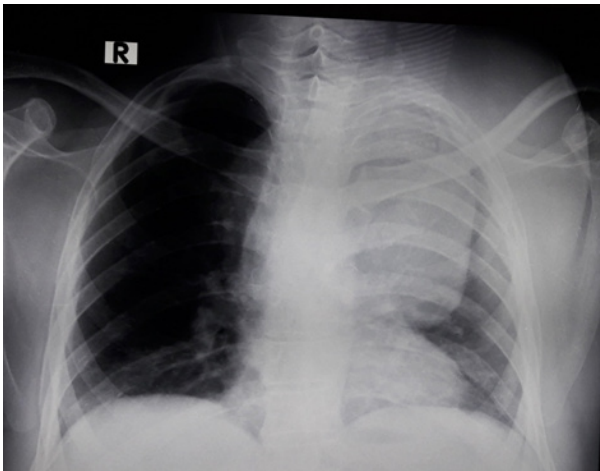
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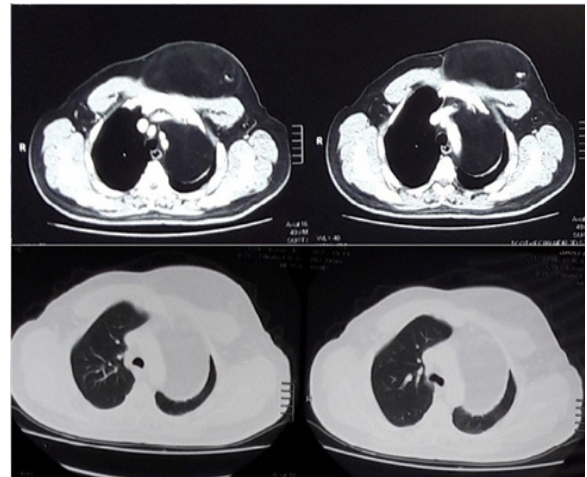
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abutting mediastinum up to the pulmonary artery and was causing atelectasis of adjacent lung tissue (figure 2). Differential diagnosis included liposarcoma and giant lipoma. A core tissue biopsy was performed showing mature adipose tissue without any malignant cells consistent with lipoma. Surgical excision was planned under general anaesthesia. Per-operatively, mass in front of chest was capsulated and excised. It was in continuation with intra-thoracic part through narrow thoracic inlet. Intra-thoracic part was larger and was therefore removed as piecemeal. After removal of intra-thoracic part a drain was placed in intra-thoracic region. Recovery was unremarkable. Post-operative

largest piece of removed tissue measured 190mm × 170mm × 50mm, while small pieces collectively measured 150mm × 160mm × 20mm (figure 3). The Specimen was sent for histopathology. Patient was discharged on 3rd post-operative day with drain in situ. Drain was removed on 6th post-operative day followed by removal of stiches on 10th post-operative day. Final diagnosis on histopathology was “lipomatous tumour with few atypical cells”. Patient remained free of any symptoms. Follow up with Magnetic Resonance Imaging (MRI) chest was planned to exclude remnant/recurrence, followed by treatment accordingly (Radiotherapy for residual and recurrence).



**Figure 1:** X-ray Chest (PA) showing soft tissue mass occupying middle and upper part of left chest.



**Figure 2:** CT scan chest showing hypodense mass lesion involving left anterior chest wall with few calcifications and septations, extending from upper to mid chest cavity.



**Figure 3:** Post-Operative Specimen of giant lipoma.

## Discussion

Benign tumours of chest are rare. Lipoma may be seen anywhere in the body and at any age [6]. Lipomas are well circumscribed mesenchymal tumours, originating from adipose tissue. Giant lipomas are rarely reported over the chest wall [6]. Local and global incidence is not exactly known; though incidence of lipoma in soft tissue tumours is about 6% [7]. Most common sites are thigh, shoulder and trunk. Lipomas usually involve subcutaneous tissue. They rarely extend into the deeper tissue as in this case i.e. Intra thoracic extension. Due to slow growth and soft consistency with minimal symptoms, patient usually avoids definite treatment for many years. Patient consults physician, once they become symptomatic i.e. Dyspnoea was the presenting symptom in this particular case. Symptoms and signs are closely related to site and size of the tumour. They may be due to pressure effect on surrounding tissue or stretching for neuronal tissue. In our case presenting complain of dyspnoea was due to pressure effect over left lung. Even psychosomatic symptoms are not uncommon with giant lipomas [7].

Diagnosis is usually clinical. Role of USG, CT scan and MRI is well established in making diagnosis. Tissue biopsy is a confirmatory investigation [8]. We used USG to see composition of tumour. CT scan was done to further characterize the lesion inform of its composition, extensions and involvement of vital viscera. These details are of great help in surgical planning and to avoid any emergency situation, especially in vital areas like thorax. Core tissue biopsy was performed to confirm the diagnosis pre-operatively.

Surgical excision of the lump was the treatment of choice; however, liposuction remained another option. This huge lump was removed surgically under general anaesthesia. Post-operatively largest piece of removed tissue measured 190mm × 170mm × 50mm, while small pieces collectively measured 150mm × 160mm × 20mm, full-filling the criteria of Giant lipoma i.e. more than 10cm by size. Patient's recovery was uneventful after excision and remained symptoms free.

## Conclusion

Giant lipoma of the chest with involvement of thoracic cavity is a rare presentation. Even with such large size, it can give minimum symptoms. These patients therefore present late to physicians. Surgery is usually the best and safe curative option.

## List of Abbreviations

CT scan	Computerized tomographic axial scan
GA	General Anaesthesia
Mm	Millimetre
MRI	Magnetic Resonance imaging
USG	Ultrasonography

## Conflict of Interests

None

## Funding

None

## Consent for publication

Informed written consent was taken from the patient to publish this case report in a medical journal.

## Ethical approval

Ethical approval to publish a case report is not required at our institution.

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## Authors' contribution

MN is the main author of the case report and also did the surgery. MI helped in write up. MBI reviewed the manuscript critically. MSA and MMA helped in literature review and writing discussion.

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Received Date: 22 March 2017

Accepted Date: 05 July 2017

Published Online: 17 July 2017

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**Summary of the case**

<b>Patient</b>	1	Male 45 year age
<b>Final Diagnosis</b>	2	Giant Lipoma
<b>Symptoms</b>	3	Mass in front of chest with dyspnea
<b>Medications (Generic)</b>	4	N/A
<b>Clinical Procedure</b>	5	Surgery under general anesthesia
<b>Specialty</b>	6	Surgery
<b>Objective</b>	7	To document a rare case with intra thoracic extension
<b>Background</b>	8	Giant lipoma with extension in chest cavity
<b>Case Report</b>	9	Giant Lipoma chest extending into the thoracic cavity – unique entity, a case report
<b>Conclusions</b>	10	Benign giant lipoma with extension in chest cavity
<b>MeSH Keywords</b>	11	Giant lipoma, Chest cavity, Intra thoracic extension, case report