Rare disease

Huge mediastinal mass with minimal symptoms: thymolipoma

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Summary

A 35-year-old Indian working in Dubai had come to India for his annual vacation. He presented with a shortness of breath and mild chest discomfort of 3 months duration. Routine investigations gave normal results, except for his chest x-ray that showed homogenous opacity in the right mid and lower zones. Chest CT scan revealed a huge mass with fat and soft tissue involving the anterior mediastinum predominantly on the right side extending into the pericardiac region. The mass was pushing the right hemidiaphragm inferiorly and was compressing the right lung superiorly with atelectasis. The patient underwent surgical excision of the mass and recovered uneventfully. Gross specimen showed an encapsulated mass weighing 2.585 kg. Histopathological examination revealed lobules of mature adipose tissue interspersed with islands of mature thymic tissue and prominent Hassal's corpuscles suggesting thymolipoma. There was no evidence of malignancy.

BACKGROUND

Thymolipoma is a rare benign disease. We have not come across a similar case in our institution in the past 20 years.

It attains a huge size with minimal symptoms due to pressure effects on the adjacent structures. Usually, it can be excised in toto. We could excise the tumour in our

patient without any complications despite its huge size and proximity to major vessels (figure 1).

CASE PRESENTATION

A 35-year-old gentleman working in Dubai had come to India with a shortness of breath and mild chest discomfort of 3 months duration. He had no fever, haemoptysis, loss of weight or appetite.

He was informed about the abnormality in the chest x-ray by his physician during a routine check up 5 years ago. He ignored it because he was asymptomatic.

There was no history of diabetes, hypertension or tuberculosis. Also, there was no family history of neoplastic or autoimmune diseases.

Physical examination revealed no pallor, icterus, cyanosis, dyspnoea, pedal oedema, clubbing or peripheral lymphadenopathy.

Figure 1 Gross specimen (sliced).

Figure 2 CT scan of chest – axial view of the mediastinal tumour.

Figure 3 CT scan – mediastinal tumour coronal view.

Figure 4 CT scan of chest – axial view at the level of the heart.

Chest examination revealed diminished breath sounds on the right side. Examination of other systems gave normal results.

INVESTIGATIONS

All his routine haematological investigations including blood counts, erythrocyte sedimentation rate, and renal and liver function tests gave normal results.

The chest x-ray showed homogeneous opacity in the right mid and lower zones obscuring the costophrenic angle, ipsilateral hemidiaphragm and the right border of the heart.

CT scan of the chest showed huge fat density mass in the mediastinum predominantly on the right side with mildly enhancing septations and ill-defined soft tissue

Figure 5 Histopathology.

attenuations (figures 2–4). It was extending into the pericardiac and prevascular regions, also compressing the right lung superiorly and pushing the right diaphragm inferiorly.

Fine needle aspiration cytology of the mass showed only adipose tissue with no evidence of malignancy.

DIFFERENTIAL DIAGNOSIS

Disorders that can cause a mass lesion in the mediastinum were considered:

- ☑ Infections – tuberculosis
- ☑ Neoplasias – liposarcoma, lymphoma, thymoma
- ☑ Lipomatosis.

TREATMENT

Surgical excision of the tumour en bloc was done by right posterolateral thoracotomy with medial sternotomy.

OUTCOME AND FOLLOW-UP

- ☑ Postoperative period was uneventful.
- ☑ Histopathological examination revealed thymolipoma. There was no evidence of malignancy (figure 5).
- ☑ He was discharged in good general condition.

DISCUSSION

Thymolipomas are rare benign thymic neoplasms of anterior mediastinum, constituting fewer than 9% of tumours of the thymus.^{1 2} They are made up of well-differentiated adipose and thymic tissues. Thymolipoma was first described in 1916.³

About 200 cases of thymolipoma have been published so far in the medical literature.² It was termed as thymolipoma in 1948.⁴

Patients with thymolipoma are usually asymptomatic but may manifest with mild pressure effects because of their huge size. It usually presents in young age, mean age of 22–26 years, and there is no sex predilection. In some of the series, 40% of patients with thymolipoma had

autoimmune diseases like myasthenia gravis,^{1 5 6} vitamin B₁₂ deficiency, hypogammaglobulinemia and aplastic anaemia. Those patients with autoimmune disease symptoms may show improvement of their symptoms after resection of the tumour.

Rarely it can present with acute respiratory distress,⁷ congestive heart failure⁸ or mimic cardiomegaly.⁹ Surgical excision can be done by either thoracotomy or thoracoscopy.¹⁰

Our patient presented with mild pressure effects due to huge mass as described in the literature. We have not come across a similar case in our institution in the past 20 years.

He presented slightly later than the mean age mentioned earlier and had no associated myasthenia gravis, vitamin B₁₂ deficiency or other autoimmune disorder.

His tumour was completely excised by thoracotomy without difficulty.

Learning points

- ▶ Thymolipoma is a rare benign encapsulated tumour that is usually asymptomatic until it reaches a huge size.
- ▶ It is usually found incidentally in patients being evaluated for some other medical problem or during routine examination.
- ▶ Complete surgical excision is the cure.

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Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Rieker RJ**, Schirmacher P, Schnabel P, *et al*. Thymolipoma. A report of nine cases, with emphasis on its association with myasthenia gravis. *Surg Today* 2010;**40**:132–6.
2. **Su-Jin Park**, Ji Young Baek, Junjeong Choi, *et al*. Thymolipoma in a 13-year-old Korean girl. *Korean J Pediatr* 2010;**53**:103–5.
3. **Lange I**. Uber ein lipom des thymus [In German]. *Zentralbl Allg Pathol Anat* 1916;**27**:97–100.
4. **Hall GFM**. A case of thymolipoma. *Br J Surg* 1948;**36**:321–4.
5. **Takamori S**, Hayashi A, Tayama K, *et al*. Thymolipoma associated with myasthenia gravis. *Scand Cardiovasc J* 1997;**31**:241–2.
6. **Zambudio AR**, Lanzas JT, Calvo MJR, *et al*. Thymolipomas in association with myasthenia gravis. *J Thorac Cardiovasc Surg* 2001;**122**:825–6.
7. **Halkos ME**, Symbas JD, Symbas PN. Acute respiratory distress caused by massive thymolipoma. *South Med J* 2004;**97**:1123–5.
8. **Lerro A**, De Luca G. Giant thymolipoma causing cardiocompressive syndrome with chronic heart failure. *Ann Thorac Surg* 2009;**87**:644.
9. **Mohan Rao PS**, Moorthy N, Shankarappa RK, *et al*. Giant mediastinal thymolipoma simulating cardiomegaly. *J Cardiol* 2009;**54**:326–9.
10. **Ferrari G**, Paci M, Sgarbi G. Thymolipoma of the anterior mediastinum: videothoracoscopic removal using a bilateral approach. *Thorac Cardiovasc Surg* 2006;**54**:435–7.

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