Dermoid Cyst Of Mediastinum

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INTRODUCTION

Dermoid cysts are congenital tumours containing derivatives of all germ layers.1 Their origin is widely accepted to be from the pleuripotent stem cells. They constitute 60% of all mediastinal tumours seen in adults and occur mostly in the anterior mediastinum and very rarely in the posterior mediastinum (3-8%).2 Usually it will be an incidental observation on routine chest X-ray that leads to clinical diagnosis.3 It is well known for the dermoids to cause tracheobronchial compression in children. In adults, however, it is extremely rare to cause symptomatic airway obstruction.4

CASE REPORT

A 22 year old man was referred to our OPD with symptoms of fever which was low grade, cough, with hemoptyisis and right sided intermittent atypical chest pain for last 4 years. He had visited many health institutes and was being treated with antibiotics and cough suppressants for the last 4 years. He had also received antitubercular therapy 3 years back but there were no improvements in the symptoms.

On examination, right side of the chest looked slightly prominent, but no mass could be palpated. A dull percussion note was present extending from fourth rib on right side of the chest and continuous with liver dullness below. On auscultation reduced breath sound over the area of dullness was found. Chest X-ray showed a homogenous opacity in right lower chest without any mediastinal shift (Figure 1). Ultrasound revealed a collection in right lower part of chest measuring 14x12x10 cms, with predominantly solid areas and a few cystic areas (Figure2). CT of the chest showed a large, well encapsulated homogenously hypodense globular lesion with discrete calcification in the wall. The capsule was enhancing following IV contrast infusion. The mass had infiltrated right upper lobe and there was segmental collapse of right lower lobe of the lung (Figure 3). He was admitted with a differential diagnosis of loculated pyothorax or infected hydatid cyst. ELISA for Echinococcal antibody was negative.

He was explored by right anterolateral thoracotomy and an intact 15 x 12 cm complex mass, which was inseparable from the surrounding mediastinal structures and right lung was noted. With careful dissection, the adhesions from the lung were separated, salvaging the phrenic neurovascular bundle, and the mass was enucleated. The external surface of the mass was rough and corrugated in appearance, but the inner surface was smooth. It contained cheesy material and debris on cut section. The histopathological report was consistent with mature cystic teratoma.

The postoperative period was uneventful.

DISCUSSION

About two third of the benign teratomas in adults are asymptomatic. Pain is the most common symptom. It can also cause dyspnoea and cough. Rarely it may rupture into the tracheobronchial tree and can cause trichoptysis and sebum expectoration. If it ruptures
into the pleura, it can cause empyema. Rupture into the pericardium causes pericardial effusion and tamponade.²,⁴

Most often there are no physical findings in a benign teratoma. Routine roentgenographic examination reveals that the teratoma usually projects into right or left hemithorax. Calcifications have been reported in one third of patients.⁵ Computed tomography reveals the extent of lesion better than a standard X-ray.⁶ Prognosis after a complete excision is excellent whereas left untreated, it can invade and compress adjacent structures. It can also undergo a malignant transformation which is refractory to cisplatin-based chemotherapy and represents a poor prognosis.⁷-¹⁰ Complications such as infection and rupture are also common. Recurrence after a complete surgical excision is unknown.⁴

ENDNOTES