

Giant hamartoma originating from the chest wall in an adult

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ABSTRACT

Hamartomas of the chest wall are rare benign lesions usually appear in infancy. We report an adult with giant hamartoma of the chest wall. A 21-year-old man was admitted to the hospital with swelling on his scapular region. An erythematous, swollen, and wide plaque formed mass lesion of 250 x 180 on the left scapular region was found in his physical examination. Thorax CT revealed a tumoral lesion in left hemithorax wall with destruction of the 3rd rib, and formation of the new bone growing and asymmetry in thorax by infiltrating surrounding soft tissues, and decreased left lung volume. Pathological findings referred to soft tissue hamartoma. After the diagnosed, the patient underwent to thoracotomy.

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Pulmonary hamartomas were first reported in 1906.¹ Hamartoma is the most common benign neoplasm that occur in the lung. However, hamartoma of the chest wall is a rare tumor with approximately 53 reported cases in the English literature.² Histologically, the lesions consist of a combination of cartilage, connective tissue, smooth muscle, fat, and respiratory epithelium. Malign transformations are rare.³ Pulmonary hamartomas occur more commonly in males. However, some authors reported the male to female ratio of 1:1.^{4,5}

Case Report. A 21-year-old man was admitted to the hospital due to an erythematous mass localized on the scapular region (**Figure 1**). The size was 25 × 18 cm and palpation determined that skin and sub-skin tissues were quite soft and lax in this area. Routine hematological studies were normal. The chest roentgenogram showed rib deformation and decreased chest volume in the upper left hemithorax (**Figures 2a & 2b**). The CT scan revealed a tumoral

lesion. It was involving the pleura and was diagnosed to cause a volume loss in left hemithorax. Destruction of the 3rd rib could be observed at the posterior chest wall (**Figure 3a**). Pulmonary function tests presented a restrictive pattern (vital capacity (VC) 65% predictive, (force vital capacity (FVC) 62% predictive, force expiratory volume, 1- second (FEV1) 81% predictive). Flexible bronchoscopic findings were normal. The CT guided fine needle aspiration biopsy was performed, but revealed no diagnosis. Consequently, incisional biopsy was performed under general anesthesia. Histopathological examination showed a soft tissue hamartoma. After the diagnosis, he was treated with en bloc excision (including 3rd, 4th, 5th ribs) via left posterolateral thoracotomy. He had an essentially uneventful postoperative course (**Figure 3b**). Three years after the resection the case lived well and without recurrence.

Discussion. Hamartomas are frequently observed as benign tumors of the lungs. Their incidence in a

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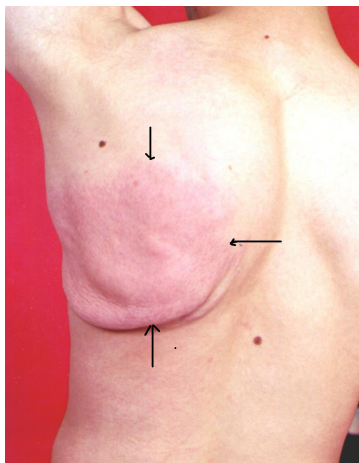


Figure 1 - Erythematous mass localized on the scapula.

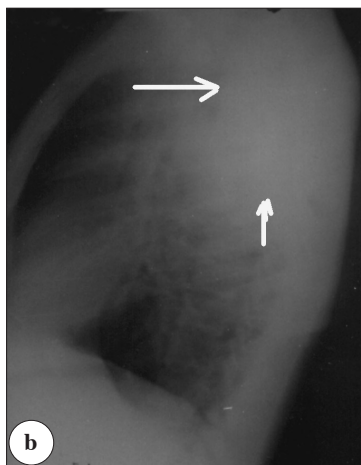
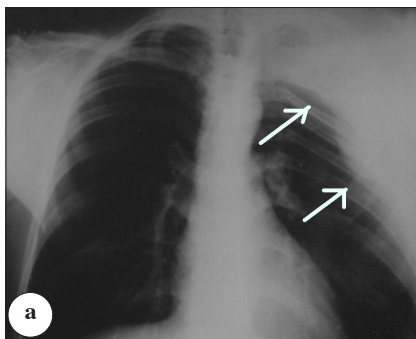


Figure 2 - Postero-anterior chest radiograph (a) lateral view (b) rib deformation and decreased chest volume in the upper left hemithorax.

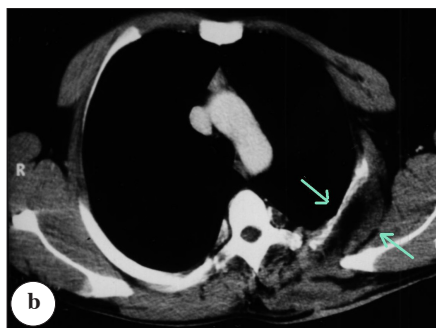


Figure 3 - A CT scan showing (a) Preoperative thorax revealed a tumoral lesion. It involved the pleura and caused decreased volume in the left hemithorax. (b) Postoperative thorax CT scan showed no tumoral lesion.

series of autopsies in the general population was reported to be 0.25%.⁶ Hamartomas originating from the chest wall are very rare. Chest wall hamartomas manifest themselves at birth or during early infancy with deformity of the thoracic wall and varying degrees of respiratory symptoms.⁷⁻⁹ The first symptom in our case started at the age of 3 and has worsened gradually over time. However, reported chest wall hamartomas are generally benign.⁸ Early complete resection is recommended in order to avoid respiratory complications and more severe postoperative orthopedic problems or malignant transformation.⁷ Both, pulmonary function disorders and chest wall deformation were seen in our case. Some authors believe that many cases with chest wall hamartoma can be managed conservatively as malign transformation has not been reported, and the lesions often become relatively smaller as the child grows up.¹⁰ On the other hand, increased risk of lung cancer in pulmonary parenchymal hamartomas also reported.¹¹

Percutaneous transthoracic fine needle biopsy yields positive diagnostic information in as many as 85% of pulmonary hamartomas.³ It was reported as hamartoma of the chest wall diagnosed by fine needle aspiration cytology in a 6-month-old boy.¹² However, we were not able to make a diagnosis with CT guided percutaneous fine needle biopsy. It was performed an incisional biopsy under general anesthesia. Histopathological examination revealed a soft tissue hamartoma. The tumoral mass was completely removed. Reviewing the literature, we could not identify case with giant chest wall hamartoma, although published cases with giant pulmonary hamartoma.¹³

Chest wall hamartomas should be treated as soon as possible in early infancy in order to avoid complications. Although our patient had symptoms since early childhood, he never had any previous treatment due to his socio-economic status.

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