

Giant Hamartochondroma of Lung: A New Case at the Mohammed VI University Hospital of Oujda

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ABSTRACT

Hamartomas are one of the most common benign tumors of the lung. We report a case of huge pulmonary hamartoma of the left lower lobe in a 33-year-old female patient. The pulmonary hamartoma was solid, measuring 30 x 16.5 x 14.5 cm, closing a cystic and calcium component. It was successfully treated by surgical resection and the final histology was a pulmonary hamartoma with no signs of malignancy. We report a new case of a giant hamartochondroma very little described in the literature

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Introduction

Pulmonary hamartoma composed of an abnormal mixture of mesenchymal elements is the most common benign neoplasm in the lung [1]. Currently, surgical treatment is the treatment of choice for these tumors; however, the indication and timing of surgery remains controversial. These tumors may have different sizes ranging from a few mm to 8 cm; beyond that, these tumors become exceptional [2].

Observation

F.R. A 33-year-old woman, with a history of pleuropulmonary tuberculosis treated in 2008, who consults for dyspnea and purulent sputum. The physical examination of the thorax showed a decrease in the transmission of vocal vibrations and the perception of vesicular murmurs at the level of the left pulmonary hemi-field. The chest X-ray showed opacity of the left lung, dense and calcified. Biology has shown an inflammatory syndrome. Bronchial endoscopy showed an insurmountable stenosis of the left lower lobe bronchus. Patient underwent left lower lobectomy under thoracotomy (Figure) with an extemporaneous anatomo pathological study showing the appearance of lobules of mature hyaline cartilage, surrounded by septa containing smooth muscle bundles, adipose lumps and mesenchymal tissue; these aspects are consistent with the diagnosis of pulmonary hamartochondroma.

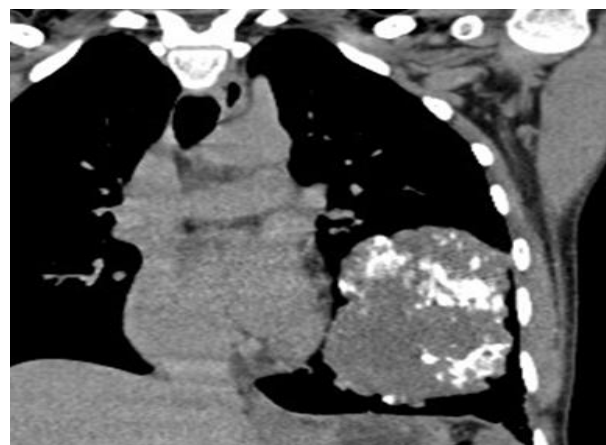


Figure 1. Computed tomography scan of thorax showing a large, 12 cm diameter, heterogeneous mass occupying almost entire left hemithorax with extensive nodular (popcorn) calcification and displacing the mediastinum to the right



Figure 2. Gross morphology of the specimen showing a bosselated mass

Discussion

The term hamartoma was first introduced by Albrecht in 1904 to describe lesions that contain an abnormal mixture of tissue elements or an abnormal proportion of a single element, normally present in an organ. While hamartoma was initially considered a development malformation, it is now classified as a true benign mesenchymal tumor, consisting of cartilage, fat, fibromyxoid connective tissue, smooth muscle, and bone.

Hamartomas can occur in any organ or region. Pulmonary hamartoma is the most common benign tumor of the lung, accounting for 3 to 8% of all lung tumors [3]. The peak incidence is between the sixth and seventh decades but can also be seen at a younger age between 30 and 60 years. They usually measure 1-5 cm in diameter, whereas those reported as giant hamartomas measure between 9 and 30 cm [4]. The maximum reported size in literature was 25.5 x 17.5 x 6.5 cm with a weight of 1,134g [5]. Most of them are seen in female patients in contrast to the usual hamartomas. The clinic is dominated by symptoms respiratory: cough, chest pain, sputum, dyspnea, hemoptysis.

Usually diagnoses of hamartomas are incidental. They constitute about 8% of all "coin" lesions in chest radiographs appearing as a solitary, round nodules sometimes with punctate or popcorn calcification. CT scan showing a well defined solitary pulmonary nodule that may show varying patterns of calcifications and intranodular fat, but the most specific popcorn-type calcification (30%) is almost pathognomonic [5]. Our case also had typical popcorn calcification. They may resemble cyt adenolaroid.

On pathological examination, both disordered growth of both endodermal (respiratory epithelium) and mesodermal (vascular) elements satisfies criteria for the diagnosis, most demonstrate a predominant chondroid differentiation (80%) [6]. It can present as nodules or cyst with increase slowly over a period of many years, neither the epithelial nor the mesenchymal cells have malignant features but malignant transformation had been described.

Asymptomatic hamartomas usually require no further treatment. The indications of re-removal include a rapid growth of tumour with symptoms, suspected primary or secondary malignant tumour or endobronchial location of lesion with post obstructive complications. Surgical removal is the curative modality in such instances. In patients with large tumors who do not choose to undergo resection, a lifelong follow up may be advisable [7].

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References

- [1] Yuanyuan Zong, Xichao Sun. A Rare Case of Giant Pulmonary Hamartoma. *J Pulm Respir Med*, 2014, 4:205.
- [2] I. Aissa, A. Messad, A. yadi, I. Zendah, S. Boudaya, F. Mezni, T. Kilani, H. Ghedira. HAMARTOCHONDROME GEANT DU POU MON. *La Tunisie Medicale*. 2010, 88, 59-60.
- [3] G.H. Ekinci, O. Hacıömeroğlu, A. Ersev, L. Alpay, H. Özgen, A. Yilmaza. The frequency of lung cancer in patients with pulmonary hamartomas: An evaluation of clinical, radiological, and pathological features and follow-up data of 96 patients with pulmonary hamartomas. *Revista Portuguesa de Pneumologia*. 2017, 23, 280:286.
- [4] Van den Bosch JM, Wagenaar SS, Corrin B, Elbers JR, Knaepen PJ, Westermann CJ. Mesenchymoma of the lung (so called hamartoma): A review of 154 parenchymal and endobronchial cases. *Thorax* 1987;42,790:3.
- [5] Vladislav Zakharov, Malcom Schinstine. hamartoma of the lung. images in cytology section editor Shahla Masood
- [6] Ganti S, Milton R, Davidson L, Anikin V. Giant pulmonary hamartoma. *J Cardiothorac Surg* 2006;1: 19.
- [7] Karan Madan, S. Sharma, N. Singh, Radhika Srinivasan. Large pulmonary hamartoma with "popcorn" like calcification. *Monaldi archives for chest disease*. 2011, 75:243-4.