

Popcorn in the Lung

Giuseppe De Luca, MD,* Salvatore Griffo, MD,† and Gaetano Rocco, MD, FRCSEd*

A 65-year-old man was admitted for breathlessness and dry cough of 3-month duration. He denied any history of cigarette smoking and asbestos exposure. The patient's physical examination revealed reduced breath sounds over middle-upper right hemithorax. The patient's laboratory data and vital signs were normal. A posteroanterior chest radiograph showed a large and well circumscribed pulmonary mass on the right side (Fig. 1). Computed tomography scan confirmed a large, solitary, well delimited, round, inhomogeneous, mass of 12 × 8 × 15 mm in size in the right upper lobe, with calcifications of a linear, nodular, irregular shape (Fig. 2). There was no mediastinal or hilar lymphadenopathy. The radiological findings were highly suggestive of a giant pulmonary chondroid hamartoma. Through a muscle sparing lateral thoracotomy, a right upper lobectomy was performed. Histologic examination yielded a well circumscribed hamartoma with predominantly benign chondroid differentiation. The patient was discharged 5 days after surgery. Pulmonary hamartomas are the most common form of benign lung tumors, derived from the peribronchial mesenchyma. The prevalence varies from 0.025% to 0.32% according to different necropsy studies. They are more common in males with a peak incidence in the sixth or seventh decade of life. Pulmonary hamartomas can be divided into parenchymal (90%) and endobronchial (10%) and can be chondromatous or leiomyomatous or a combination thereof.¹ The parenchymal lesions are usually an incidental radiological finding of a round opacity in the periphery of the lung. The presence of calcifications typically dispersed in the form of multiple clumps throughout the lesion in a popcorn configuration can be found in 10–15% of pulmonary hamartomas on chest radiographs.² Pulmonary chondroid hamartomas measuring over 10 cm are very rare.¹ Lobectomy is the operation of choice when a giant tumor causes complete replacement of the lobe as in our case.

REFERENCES

1. Ganti S, Milton R, Davidson L, Anikin V. Giant pulmonary hamartoma. *J Cardiothorac Surg* 2006;1:19.
2. Madan K, Sharma S, Singh N, Radhika S. Large pulmonary hamartoma with "popcorn" like calcification. *Monaldi Arch Chest Dis* 2011;75:243–244.



FIGURE 1. Posteroanterior chest radiograph detecting a large and well circumscribed pulmonary mass on the right side with diffuse calcifications.



FIGURE 2. Chest computed tomography scan revealing, in the right upper lobe, a large, solitary, and inhomogeneous mass with "popcorn" calcification.

*Department of Thoracic Surgery and Oncology, Division of Thoracic Surgery, National Cancer Institute, Pascale Foundation; and †Division of Thoracic Surgery, University Federico II, Naples, Italy.

Disclosure: The authors declare no conflict of interest.

Address for correspondence: Giuseppe De Luca, MD, Via San Rocco 59/A, Marano di Napoli, 80016 Naples, Italy. E-mail: giu.deluc@libero.it

Copyright © 2014 by the International Association for the Study of Lung Cancer

ISSN: 1556-0864/14/0909-1418