Imaging in Oncology

Chest Mass

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Case Description

In 1999, a 49-year-old man fell, fracturing his wrist and ankle and requiring open reduction and internal fixation. He had a distant 7 pack-year smoking history. Routine preoperative chest radiograph (Fig 1) and subsequent chest computed tomography (CT, Fig 2) demonstrated a 7-cm mass in the left mid thorax. Bronchoscopy was normal. The patient was asymptomatic, and his physician elected to follow the lesion. A chest CT scan 1 year later demonstrated minimal increase in the size of the mass. Angiography showed a pulmonary blood supply with no systemic arterial feeding vessels. Since the mass was presumed to be benign, the patient was followed at an outside institution with serial chest radiographs over the next 2 years.

In September 2003 he became dyspneic, which was documented objectively with a treadmill stress test. CT scan demonstrated the mass had grown to 12.5 cm in diameter and was compressing the bronchi and lung parenchyma (Fig 3). He had no other medical problems. His physical examination and laboratory values were normal, including spirometry. Due to the interval growth and the onset of symptoms, it was decided to resect the lesion via a posterolateral thoracotomy. He was discharged home after an uneventful 4-day hospital stay.

On the basis of the clinical presentation and radiographic images, the most likely diagnosis is:

1. Intralobar pulmonary sequestration
2. Large cell carcinoma of the lung
3. Localized fibrous tumor of the pleura
4. Rounded atelectasis

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