

A 22-year-old Woman Had a Lung Mass

A 22-year-old woman had an abnormal chest X-ray (Fig. 1) in her regular health examination. She was asymptomatic and a non-smoker. Chest computed tomography (CT) revealed a 4-cm soft tissue mass with internal calcification (Fig. 2A) and enhancement in the left lower lobe (Fig. 2B). The patient received left lower lobectomy.

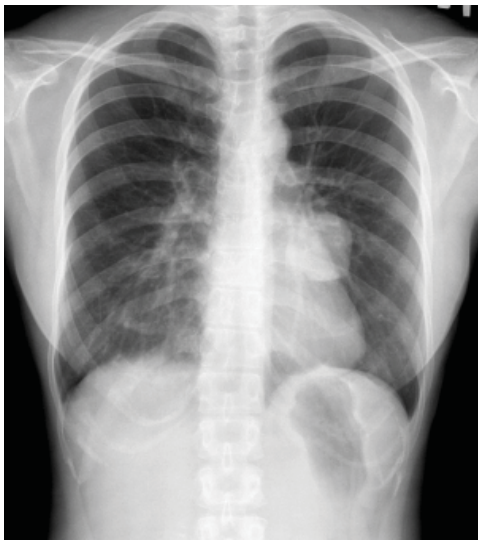


Fig. 1. Chest X-ray of patient on presentation.

What is the diagnosis?

- A. Bronchogenic carcinoma
- B. Bronchopulmonary carcinoid tumour
- C. Teratoma
- D. Bronchogenic cyst
- E. Calcified granuloma

The patient recovered well, without any complication after the operation. Microscopic examination showed a typical carcinoid tumour with interconnecting trabeculae of uniform cells separated by prominent vascular stroma, focal ossification, low mitotic activity and no necrosis.

Carcinoid tumour is a type of neuroendocrine tumour that is uncommon in the lung, even though the lung is the second most common site for this condition, after the rectum. This low-grade malignant disease of unknown aetiology may be asymptomatic or patients may present with wheezing, haemoptysis, recurrent pulmonary infection or symptoms related to ectopic secretion of biologically active hormones. The tumour may be central or peripheral, and a perihilar mass lesion is a common radiographic presentation. Owing to its high vascularity, central or rim enhancement on CT is seen. Up to 30% of the tumours may manifest as calcification visible on CT.¹ Surgery is the mainstay of treatment, resulting in a survival rate of about 80% at 5 years.²

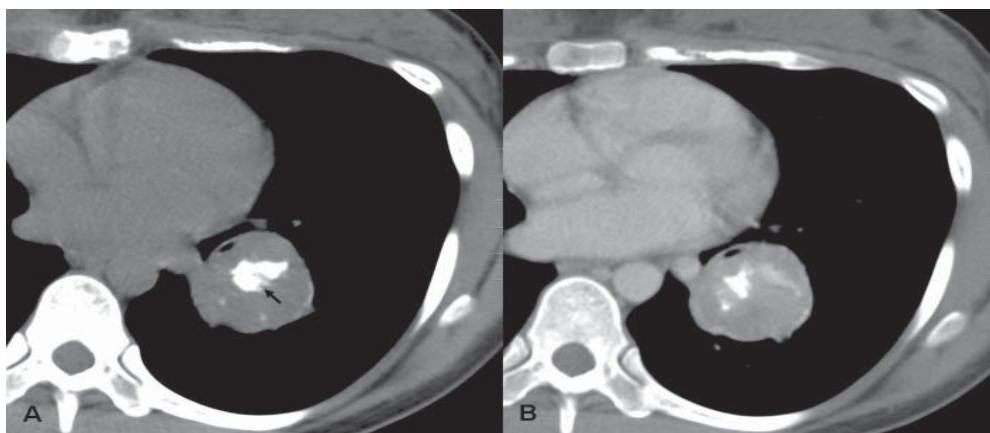


Fig. 2. Computed tomography performed 6 days later, (A) without contrast and (B) with contrast medium administration. Internal calcification (arrow) in the tumour is noted.

Answer: B

In bronchogenic carcinoma, radiological findings include mixed solid and ground-glass nodules, bubble lucencies, large size, spiculated margins, and the patients frequently have smoking history. Calcification may also be present in bronchogenic carcinoma whereas presence of central or diffuse calcifications in a smoothly marginated nodule is virtually diagnostic of a granuloma.

Intrapulmonary bronchogenic cyst is relatively uncommon and a majority of the cases are subpleural at lower lobes and may eventually contain air. Mature teratomas may contain discrete areas of soft tissue, fluid, high local fat content, punctate calcifications, or a combination of these areas on CT. A peripheral lucency is a distinguishing feature of intrapulmonary teratoma, that indicates air within the cavity arising from bronchial communication.³

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