CHEST Postgraduate Education Corner
CHEST IMAGING AND PATHOLOGY FOR CLINICIANS

A 50-Year-Old Man With a Cough and Painful Chest Wall Mass

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A 50-year-old man presented with a 1-week history of a painful hard lump above his right nipple. He attended the Accident and Emergency Department when the lump suddenly grew bigger and more painful. He had been unwell for 4 weeks, with a productive cough, loss of appetite, and weight loss. He was normally well, and there was no relevant medical history. He smoked 50 cigarettes a day and drank excessive quantities of alcohol each week. He worked in a warehouse and had not traveled outside the United Kingdom. On examination, he was comfortable at rest and did not look unwell. He was apyrexial, and oxygen saturations were 98% on room air. His BP was 110/70 mm Hg, and pulse rate was 90 beats/min. There was a large, hard, tender mass above his right nipple associated with some bruising of the skin. On auscultation of his chest, a few crackles were audible. His dentition was poor. The remainder of his physical examination was normal.

Case Report

Laboratory workup showed a hemoglobin concentration of 9.7 g/dL, WBC count of 21,000 cells/μL, neutrophils count of 19,000 cells/μL, platelet count of 438,000 cells/μL, sodium concentration of 127 mmol/L, potassium concentration of 3.6 mmol/L, creatinine concentration of 56 μmol/L, and C-reactive protein level of > 150 mg/L. An HIV test result was negative.

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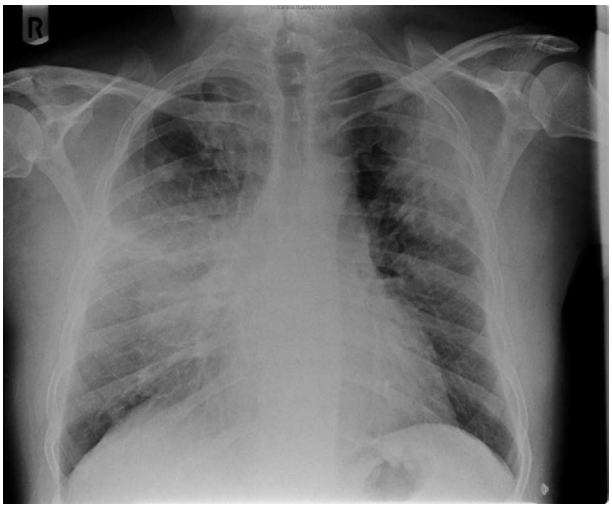

Figure 1. Chest radiograph showing multifocal bilateral consolidation. There is a diffuse, poorly marginated, increased opacity in the right midzone and enlargement and increased density of the soft tissues, suggestive of a chest wall mass.

The patient underwent a chest radiograph (Fig 1) and a contrast-enhanced CT chest scan (Figs 2-4). The chest radiograph showed multifocal, bilateral consolidation and diffuse, poorly marginated, increased opacity

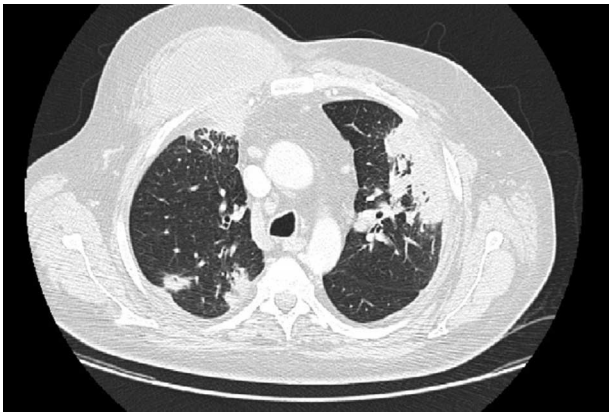

Figure 2. The CT scan shows multifocal, bilateral, nodular, and mass-like consolidation.

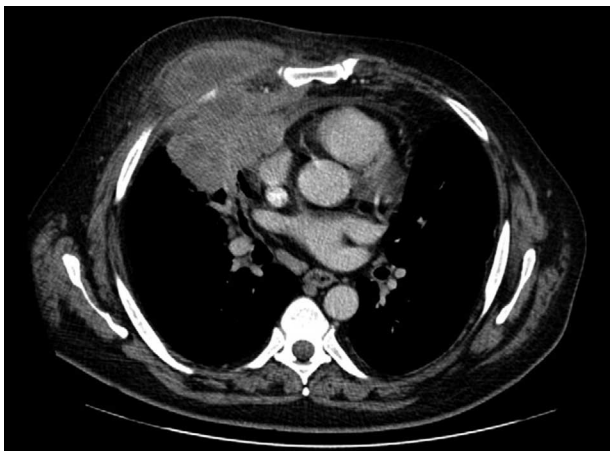

FIGURE 3. CT scan showing the mass-like consolidation in the middle lobe contains areas of low attenuation in keeping with necrosis and is causing rib and costal cartilage erosion; it extends directly into the anterior chest wall, deep to the pectoralis major muscle, where there is a multiseptated low-density collection.

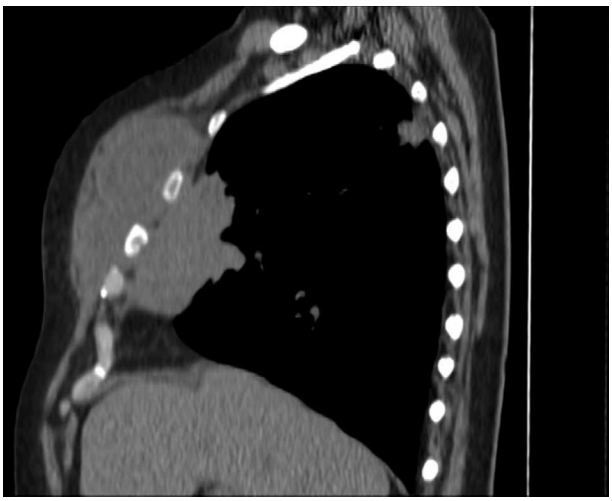

FIGURE 4. CT scan sagittal view showing rib erosion.

in the right midzone and enlargement and increased density of the adjacent soft tissues, suggestive of a chest wall mass. The CT scan showed multifocal bilateral nodular and mass-like consolidation, which contained areas of low attenuation in keeping with necrosis (Figs 2, 3). The mass-like consolidation in the middle lobe was causing rib erosion and extended directly into the anterior chest wall, deep to the pectoralis major muscle, where there was a multiseptated low-density collection (Figs 3, 4).

An ultrasound of the right anterior chest wall was performed, which confirmed that the swelling was caused by a localized fluid collection. Image-guided aspiration yielded frank pus. Gram stain showed gram-positive filamentous rods.

What is the diagnosis?