This 45-year-old man was hospitalized for evaluation of a tender mass in the back. He gave a history of malaise and 35 lb weight loss in three months. One month ago, he developed an unproductive cough and fever. A chest roentgenogram at that time showed right upper lobe infiltrate. He smoked approximately 20 cigarettes a day for over 20 years. His pulse was rapid and he had a low grade fever. A tender fluctuant mass was noted medial to the right scapula. Breath sounds were normal. Intermediate strength PPD (5TU) was negative. Figures 1 and 2 represent the chest roentgen findings on admission.

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**Figure 1**

**Figure 2**
Diagnosis: Pulmonary Actinomycosis with Erosion of Contiguous Ribs and Extension into the Chest Wall

Figure 1 shows an ill-defined infiltrate in the right upper lung field. Figure 2, a close-up, discloses erosion of the inferior borders of the sixth and seventh right ribs posteriorly.

The fluctuant mass was aspirated and many sulfur granules were found. On anaerobic culture *Actinomyces israelii* was isolated.

In reviewing the roentgen manifestations of thoracic actinomycosis in 15 patients, Flynn and Felson\(^1\) found that the most common presentation was a mass or an infiltrate. Chest wall involvement was present in nine patients, soft tissue swelling in four, periostitis in four, and frank rib destruction in two. Pleural involvement, either effusion or thickening, was seen in most patients. Penetration of a pulmonary lesion through an interlobar fissure occurred in four patients.

Some of the principal roentgen features of thoracic actinomycosis are present in the case described. The chronic nature of the infiltrate, erosion of the adjacent ribs and the chest wall mass (Fig 3) are highly suggestive of actinomycosis.\(^2\) Transgression of an interlobar fissure is not demonstrated and significant pleural involvement is absent in this patient.

**REFERENCES**