Right Upper and Middle Lobe Consolidation

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This 48-year-old white man, an alcoholic, had a respiratory illness with cough and sputum pro-
duction for several weeks. Upon admission to the hospital, the patient was somewhat confused and acutely dyspneic with acrocyanosis. His temperature was 99.6° F, pulse rate 110 and irregular, and respirations were 42. White blood cell count was 9,000, but rose the next day to 32,000 with a left shift.

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Diagnosis: Mixed Klebsiella (Friedländer's) and Pneumococcal Pneumonia

Chest roentgenograms (Fig 1,2) demonstrate a dense right upper and middle lobe infiltrate with bulging of the major fissure. The patient at first showed slight clinical improvement on intravenous penicillin, but seven days later his condition deteriorated. A chest film at that time showed multiple radioluencies within the consolidation. Sputum culture showed Klebsiella and Pneumococcus. Over the next several weeks the small cavities coalesced into a single large one (Fig 3).

At time of right upper lobectomy, most of the parenchyma was replaced by a 10 x 8 x 3 cm empty cavity covered with necrotic tissue. There was open communication between the bronchus and the cavity. The cavity was lined by chronic inflammatory cells and debris. The wall was markedly fibrotic and no definite epithelial lining could be identified. The patient recovered uneventfully.

Klebsiella can produce lethal pneumonia in chronically ill, debilitated or alcoholic patients. Pathologically, there are multiple foci of consolidation of varying stages which have a tendency to coalesce.

Onset of symptoms may be acute with rapidly mounting fever, chills, pleuritic pain and expectoration of copious amounts of thick, ropy brown sputum. Delay in treatment may result in fatal outcome or in a prolonged clinical course with abscess formation, as in this patient.

The roentgen findings that suggest Klebsiella pneumonia include: (1) predominant upper lobe involvement, especially on the right; (2) consolidation with lobar enlargement; (3) sharp advancing borders of the infiltrate; and (4) abscess formation.

Lobar enlargement, radiographically manifested by the bulging minor or major fissure, is often the earliest diagnostic clue. This can be mimicked by encapsulated interlobar fluid; however, the latter shows a sharply defined biconvex shadow, whereas lobar enlargement presents only a single discrete convex border at the surface adjoining the interlobar septum. A bulging interlobar fissure is not pathognomonic of Friedländer's pneumonia since it may occasionally be seen in tuberculosis, pneumococcal pneumonia, abscess, and carcinoma. However, its high incidence in Friedländer's pneumonia should enable one to suggest the diagnosis in a patient with acute pneumonia.

REFERENCES