Clinical picture

Chest X-ray mass in a patient with lung cancer!

A 69-year-old gentleman with extensive small cell lung carcinoma was admitted to hospital for further treatment of a lung abscess detected after a third cycle of chemotherapy. He had a 4-week history of a productive cough and recent rigours which had been treated with antibiotics without improvement. Findings included decreased air entry with localized wheeze in the left upper zone, a temperature of 38.2°C, leukocytosis with neutrophilia and a rounded mass on chest X-ray (Figure 1). Computed tomography (CT) of the thorax demonstrated a fluid-filled cavity in the left upper lobe in keeping with a pulmonary abscess (Figure 2). A CT guided drain was inserted into the abscess and green coloured fluid was immediately drained (Figure 3). Microbiological analysis revealed *Escherichia coli* and appropriate antibiotics were continued. A total of 300 ml was drained and a chest X-ray 6 days later demonstrated almost complete resolution of the abscess (Figure 4). The patient was referred back to the oncology service on oral antibiotics.

Lung abscess is most frequently caused by bacteria from the oral cavity including *Bacteroides*, *Fusobacterium* and *Peptostreptococcus*, although many other bacteria including *Staphylococcus aureus*, *Klebsiella* and gram-negative bacilli can also be found, albeit less frequently.1

Predisposing factors include oral cavity disease, altered consciousness through alcoholism, seizures or coma, bronchial obstruction with tumour, immunosuppression with steroids or chemotherapy and oesophageal disorders such as achalasia or reflux.

In cases where fluid has not been sampled, empirical therapy for anaerobic abscess is clindamycin 600 mg/8 h IV followed by 300 mg/6 h orally.2 Treatment, often requiring months of therapy, is continued until the X-ray shows complete resolution or at the very least a small stable residual lesion.3 Surgery is not generally required for uncomplicated lung abscess. Indications include medical therapy failure, suspected neoplasm or haemorrhage. Indicators of potential medical therapy failure include large abscesses, resistant organisms and foreign body involvement. Alternative methods include percutaneous or endoscopic drainage.4,5

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**Figure 1.** Chest X-ray revealing a mass in the left lung.

**Figure 2.** Computed tomography of the thorax demonstrating a cavitating lesion with an air-fluid level.
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References