



Acute barium contrast aspiration

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Clinical image description

During an upper gastrointestinal series to evaluate for gastric outlet obstruction, a 79-year-old man aspirated barium sulfate contrast which was visualized in the right lung (Figure 1). Testing was aborted and he was managed conservatively. He remained stable and without respiratory symptoms until hospital discharge.

Barium aspiration is uncommon. Elderly patients and those with dysphagia or neurologic deficits are more at-risk. Unlike water-soluble contrast such as gastrografin, barium sulfate is inert and should not cause chemical pneumonitis. However, there have been cases of inflammation following barium aspiration, possibly related to additives or concurrent gastric content aspiration [1]. Barium aspiration can lead to dyspnea and hypoxia secondary to mechanical impairment of alveolar gas exchange and alveolar shunting [2].

Treatment involves supportive respiratory care such as supplemental oxygen. Bronchoalveolar lavage is not recommended as this may further disseminate the barium to a larger surface area and inadvertently cause respiratory compromise.

Barium is engulfed by alveolar macrophages leaving impressive radiographic findings which are permanent [3] (Figure 2). While postural changes may reduce its incidence, the risks of aspiration should be considered when planning gastrointestinal studies in at-risk patients. Furthermore, contrast aspiration should be considered in those who develop dyspnea following these studies.



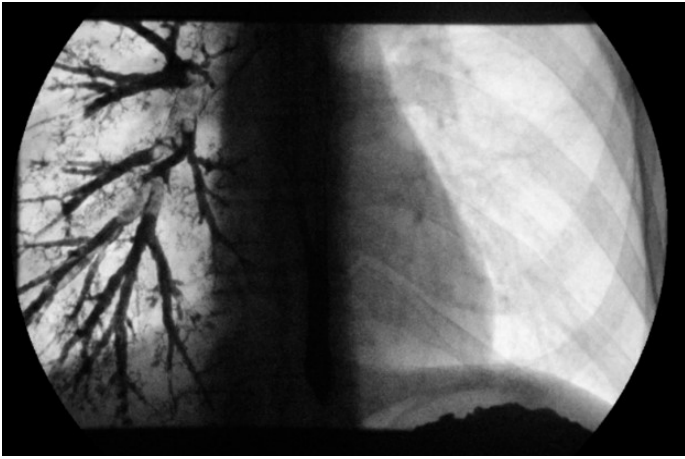


Figure 1: Fluoroscopic image of Right Bronchial tree after Barium Aspiration.



Figure 2: Chest X-Ray image after Barium Aspiration.

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