CLINICAL IMAGES

When Barium Goes Down the Wrong Pipe: a Severe Case of Aspiration Pneumonitis

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A 61-year-old cachectic man with stage IV oropharyngeal cancer status post tracheostomy and palliative chemoradiotherapy presented to the ED with hypoxemia and respiratory distress due to recurrent aspiration. He agreed to enteral feedings and underwent a barium swallow study, per standard institutional protocol, in preparation for percutaneous gastrostomy tube placement. Following barium ingestion, the patient developed

Image 1 Chest X-ray PA view showing large-volume aspiration of barium into the right lower lobe.

worsening hypoxemia, hypotension, and fever. Sepsis evaluation and broad-spectrum antibiotics were initiated. All cultures were negative. CXR revealed large-volume aspiration of barium into the right lower lobe (Image 1).

Barium sulfate is an inert material widely used to visualize anatomy and reveal abnormalities in the gastrointestinal tract. Although oral intake of barium is often harmless to the body, large aspirated amounts can cause anaphylaxis, chemical pneumonitis, airway obstruction, and clinical decompensation.^{1,2} Clinicians must consider the volume and dose of barium to be administered and seek alternative studies in those with predisposing risk factors (e.g., head and neck cancer, dysphagia, and frequent aspirations).^{2,3} No treatment for barium aspiration exists beyond supportive therapy including supplemental oxygen, IV fluids, and antibiotics for superimposed infections.^{2,3} This patient stabilized with a 5-day course of antibiotics and supplemental oxygen. He underwent gastrostomy tube placement and tolerated enteral feeding upon discharge.

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Declarations:

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