

Barium Sulfate Aspiration

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A woman was evaluated for dyspnea after she inhaled barium sulfate during an upper gastrointestinal barium study that was administered by means of a percutaneous endoscopic gastrostomy tube. A plain radiograph of the chest revealed alveolar barium sulfate depositions (arrows) in the middle lobe of the right lung and in the lower lobes and the posterior aspects of the upper lobes of both lungs (image). Because of substantial hypoxia (SpO_2 , 58.4%), the patient was transferred to the intensive care unit, where she received endotracheal intubation and mechanical ventilator support for 2 weeks. The patient then underwent tracheotomy and was discharged to a long-term acute care hospital, where she continued to receive ventilator support. At 2-month follow-up, the patient's symptoms had not improved, and she needed intermittent ventilator support.

Oral barium sulfate aspiration is an uncommon but well-reported complication of upper gastrointestinal contrast material studies and is associ-

ated with a mortality rate of 30% to 50%.¹ Postural techniques (eg, lying on the side, rotating the head, moving the head downward so the chin touches the neck) may minimize the risk of aspiration during oral administration of barium sulfate.² Although a well-recognized complication of oral administration, aspiration can still occur with direct gastric instillation. Clinicians should pay attention to the postural support of patients undergoing direct gastric instillation.

References

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