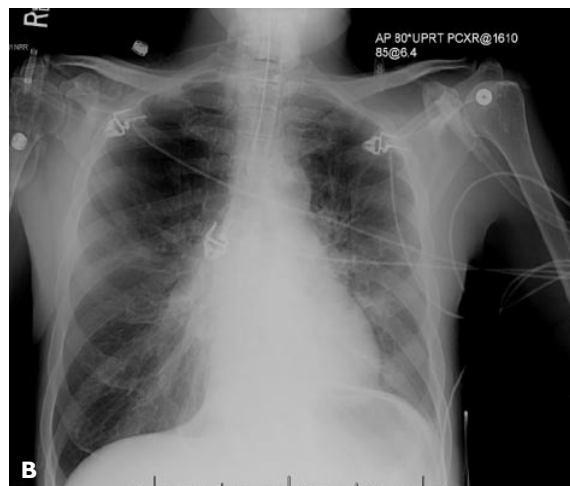
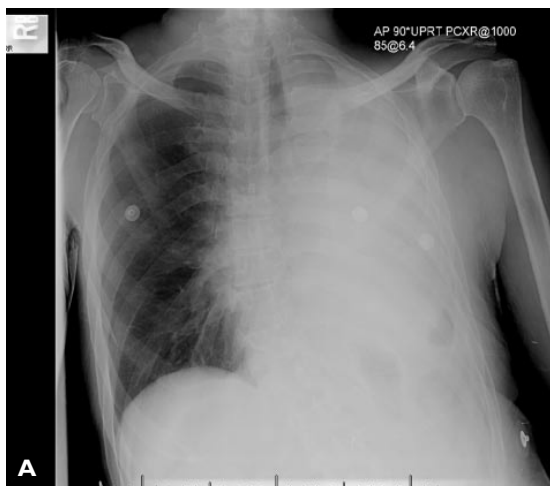


Unilateral White Out on Chest Radiograph

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A 60-year-old man with a history of mental retardation, seizure disorder, and multiple episodes of aspiration pneumonia was admitted to the intensive care unit with a 3-day history of progressively worsening shortness of breath and hypoxemia. Upon admission, he was hypotensive and in respiratory distress. Chest radiograph showed collapse of the entire left lung with ipsilateral mediastinal shift (**Image A**). Urgent bronchoscopy was performed with suctioning of copious secretions from the left lung. The patient's chest radiograph findings were thought to be due to bronchial obstruction as a result of mucus plugging secondary to his inability to effectively clear upper airway secretions. A chest radiograph obtained following bronchoscopy showed dramatic improvement of the left lung (**Image B**).

The most common causes of a unilateral white out on chest radiograph include pneumonia, pleural effusion, and collapse/atelectasis. The most important finding that may help differentiate the etiology of unilateral white out is tracheal deviation or mediastinal shift.¹⁻³ With a finding of a central mediastinum, diagnostic considerations include consolidation/pneumonia, pleural effusion (small to moderate effusion gravitates posteriorly without producing mediastinal shift), and mesothelioma, in which encasement of lung limits mediastinal shift. Mesothelioma is often associated with pleural effusion that obscures

the mass. With mediastinal displacement away from the diffuse opacity, considerations include a moderate to large pleural effusion and diaphragmatic hernia (on the right side from liver, on the left from herniated bowel). Finally, mediastinal displacement toward the diffuse opacity is seen in lung collapse, post-pneumonectomy, and in pulmonary agenesis/hypoplasia.

Management of the patient with diffuse opacity on chest radiograph depends on the clinical presentation. If the patient is hypoxic and in respiratory distress (as this patient was), urgent bronchoscopy may be indicated. For a stable patient, computed tomography (CT) scan of the chest would be appropriate to obtain a detailed picture of the lung parenchyma and assess for the presence of a lung mass, cyst, or pleural effusion. Further management depends on the CT scan findings. **HP**

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