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Acute dyspnea after colonoscopy

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Case Presentation

A 64 year-old male with Human immunodeficiency virus, pulmonary tuberculosis treated 20 years ago, and cirrhosis was admitted with chronic, progressive dyspnea and found to have severe iron deficiency anemia (hemoglobin 4.6 g/dL). To evaluate the anemia, a colonoscopy was performed but was non-diagnostic due to suboptimal bowel preparation. Within 2 hours the patient developed acute dyspnea and abdominal discomfort. A chest radiograph is shown in Figure 1.

Acute onset dyspnea after an endoscopic procedure involving bowel manipulation should raise suspicion of bowel perforation. While bowel perforation is a rare complication of diagnostic colonoscopy, occurring in less than 1%¹, certain factors place individuals at higher risk. These include suboptimal bowel preparation (as was the case in our patient), prior bowel surgery, steroid therapy, removal of a large polyp (>20mm), bowel inflammation due to underlying malignancy or inflammatory bowel disease, female gender, and age over 75 years². Anatomically, the sigmoid colon is the site at highest risk of perforation due to colonoscopy¹. Our patient's acute dyspnea resulted from the upward displacement of the diaphragm due to tension from perforation-induced pneumoperitoneum. Additional symptoms of bowel perforation include severe abdominal pain and distention, nausea, vomiting, fever, and chills. Physical exam may reveal diminished or absent bowel sounds, subcutaneous emphysema, tympany on percussion, and peritoneal signs on palpation. When pneumoperitoneum is suspected, emergent abdominal or chest radiography is warranted. Our patient's chest radiography (Figure 1) demonstrated a large pneumoperitoneum (large white arrows) with upward displacement of the diaphragm. It also demonstrates right upper lobe scarring (small yellow arrow) with volume loss and leftward traction of the trachea (large yellow arrow) likely due to the patient's prior history of tuberculosis. Bowel perforation resulting in substantial pneumoperitoneum necessitates emergent surgical exploration. Our patient underwent emergent laparotomy revealing sigmoid colon perforation, which was subsequently oversewn. Broad-spectrum intravenous antibiotics and intravenous extracellular fluid volume replenishment were also initiated. Unfortunately, in spite of aggressive management, he developed disseminated intravascular

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coagulopathy, as well as renal and respiratory failure. After prolonged hospital course, comfort care measures were instated.

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Figure 1.