Air in the whole body after colonoscopy in a patient with ulcerative colitis

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To the Editor,

In previous reports, the authors described patients suffering bilateral tension pneumothorax during colonoscopy and laparoscopic procedure (1,2). Here we report a case with ulcerative colitis also found catastrophic complications with bilateral tension pneumothorax after colonoscopy.

A 44-year-old man, American Society Anesthesiologists class II, was scheduled for diagnostic colonoscopy under monitored anesthesia care. He had a past history of ulcerative colitis and hepatitis C with regular control. Preoperative examinations were unremarkable. At his visit, vital signs were follows: noninvasive blood pressure (NIBP) of 158/80 mmHg, heart rate (HR) of 110 beats per min (bpm) and room air oxygen saturation (SpO_2) of 100%. In the exam room, we gave the patient 2% xylocaine 50 mg intravenous and continuous infusion of propofol under controlled infusion (Orchestra® Base Primea, Fresenius Vial, Brezins, France) with Schnider model Ce: 4.0-7.0 mcg/ml. The colonoscopic examination revealed diffuse ulcers over descending and sigmoid colon and rectum compatible with ulcerative colitis, and a 4 cm polypoid mass impacted over the rectum and sigmoid colon about 10 cm level. However, the operator suspected air leakage from the equipment because inadequate air inflation persisted during procedure. The procedure took 40 minutes.

When the patient waked up, he complained of dyspnea, chest pain, neck pain, and abdomen distension. Physical examination found the crepitus in bilateral neck and upper chest and the lungs revealed no breathing sound bilaterally. At the same time, HR increased to 124 bpm, blood pressure could not be measured and SpO_2 decreased from 100% to 87% even under oxygen mask. Portable chest X-ray revealed bilateral pneumothorax, then percutaneous needle decompression was performed by using 16 G catheters bilaterally. After the emergent management, the patient was stable with NIBP of 144/92 mmHg, HR of 108 bpm, and SpO_2 98% under face mask with 60% oxygen.

Because we suspected colon perforation, a computed tomography scan was performed, which revealed severe extensive subcutaneous emphysema of the whole body wall, both neck and both proximal upper extremities, as well as severe pneumomediastinum, massive bilateral pneumothorax, severe pneumoperitoneum and pneumoretroperitoneum (more on right side), collapsed both lungs. Therefore, bilateral chest tube was placed.



Figure 1. — Contrast-enhanced computed tomography showing (A) Bilateral tension pneumothoraces, severe pneumoperitoneum, pneumoretroperitoneum, and severe extensive subcutaneous emphysema of the whole body wall, (B) Bilateral pneumothoraces and collapsed lung, pneumomediastinum, and subcutaneous emphysema.

The patient was admitted to intensive care unit for conservative treatment. However, sepsis and peritoneal signs were noted three days later, and the biopsy pathology reported adenocarcinoma. Surgical treatment was performed with total colectomy and protective ileostomy. Seven weeks after surgery, he was discharged and his tension pneumothorax and subcutaneous emphysema were resolved without any clinical sequelae.

Ulcerative colitis is a risk factor for colon perforation during colonoscopy (3), and persistent inadequate air inflation so the operator need to inflate more air while the equipment was working is a warming sign of colon perforation. The air from the site of colonic perforation pass into the retroperitoneal space causing pneumoretroperitoneum, pneumomediastinum, pneumothorax, and subcutaneous emphysema during colonoscopy (4). Management of this life-threatening complication requires closely monitor of the patient's condition. Moreover, tube thoracostomy may be necessary when

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the patient is hemodynamically unstable or has a compromised ventilatory status in pneumothorax.

Conflicts of Interest

None.

Reference

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