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Post-Colonoscopic Polypectomy Pneumoperitoneum Successfully Treated by Paracentesis

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Figure **1** Abdominal radiography 6 days after colonoscopy showed a large pneumoperitoneum.

Perforation is the most common complication of colonoscopy, with an incidence of 0.3 % after polypectomy [1]. The management of perforation depends on whether there is coexisting peritonitis, the timing of the diagnosis, and on the patient's clinical condition and course, but conservative therapy is seldom indicated [1 – 3].

We report the case of a 67-year-old man who underwent a screening colonoscopy: several diverticula and a 35-mm pedunculated polyp were observed in the sigmoid colon. The polyp was excised by snare polypectomy, using coagulating and cutting current, and there were no immediate complications. Two days after the procedure the patient developed diffuse abdominal discomfort that was exacerbated by movement. He continued to eat and he continued to have bowel movements. He had no fever and no signs of peritoneal irritation.

Four days later, the clinical picture was the same but there had been a progressive increase in the patient's abdominal volume, with a greatly distended, tympanic abdomen. There were still no signs of peritonitis, however, and laboratory studies were normal. Abdominal radiography revealed a large pneumoperitoneum (Figure **1**). Abdominal computed tomography showed no free intraperitoneal fluid. We did not perform an enema with water-soluble contrast because of the potential risk of opening a covered perforation.

The patient was admitted after surgical evaluation, and managed with a nil-permouth regime and intravenous antibiotics. The persistent pneumoperitoneum was well tolerated and the patient's general condition was stable. He was discharged on the third day and followed closely.

On day 22 post-colonoscopy, the clinical picture persisted. With the patient in the Trendelenburg position, a paracentesis was performed by inserting a 16-Fr catheter in the midline, 2 cm below the umbilicus. Gas was promptly released, causing visible diminution in abdominal volume, with immediate symptomatic improvement. Post-paracentesis abdominal radiographs demonstrated complete resolution.

Post-colonoscopy pneumoperitoneum most commonly results from bowel perforation and is usually a life-threatening condition that requires emergency surgery [4, 5]. In this case the patient had no clinical or laboratory evidence of peritonitis. His good general condition, the delayed appearance of the pneumoperitoneum, and the lack of co-morbidity supported the choice of conservative therapy under close observation, in collaboration with the surgical team.

This patient was an exceptional case in being successfully treated by paracentesis, which is an unusual choice of treatment in this condition. However, this procedure cannot be recommended without careful interdisciplinary consultation. The unusual failure of the pneumoperitoneum to resolve spontaneously may have been related to the compositon of the gas.

A. Vieira, V. Fernandes, J. Freitas
Department of Gastroenterology and Hepatology, Hospital Garcia de Orta, Almada, Portugal.

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Corresponding Author

A. Vieira, MD

Department of Gastroenterology and Hepatology
Hospital Garcia de Orta
2800 Almada
Portugal
Fax: +351-212957004
E-mail: anaircvieira@hotmail.com