

## Colonoscopy-related esophageal perforation: report of two cases

We report two cases of colonoscopy-related esophageal perforation. The first was in a 72-year-old man who underwent diagnostic colonoscopy. The procedure was uneventful. Later, he presented with dyspnea, hypotension, tachycardia, and abdominal pain. A CT scan showed left pneumothorax with pneumomediastinum. A chest drain was placed. The patient improved and no diagnosis was made at that time. He was transferred to our institution 10 days after the colonoscopy with bilateral pleural effusion. He was hemodynamically stable under antibiotic treatment. Radiography using water-soluble oral contrast revealed a low esophageal perforation, which was partially drained through the chest drain (● Fig. 1).

Two additional chest drains were inserted and a surgical feeding jejunostomy was performed. The patient restarted eating by mouth 2 months after the colonoscopy. The second patient was a 75-year-old woman with a past history of untreated hiatal hernia who underwent a routine follow-up colonoscopy. During the procedure, following abdominal compression to help the progression of the endoscope, subcutaneous emphysema appeared. An emergency CT scan showed bilateral pneumothorax with pneumomediastinum. Two chest drains were inserted. Emergency radiographs using oral contrast showed a distal esophageal perforation. The patient underwent emergency laparotomy. Esophageal perforation was confirmed and cardiac perforation was also discovered. Esophagogastrectomy with proximal esophagostomy and feeding jejunostomy were performed.

Some cases of Mallory-Weiss tears after vomiting due to bowel preparation have been described [1], but only four cases of colonoscopy-related esophageal perforation, always in a context of emesis after drinking the bowel-cleansing solution [2–5]. Our patients did not complain of emesis. In our first patient, the perforation mechanism could be related to the bowel-cleansing preparation. In our second patient (who had a large hiatal hernia), high pressure within the abdominal cavity (colonoscopy plus compression) was probably the cause of both tears. This complication could have been avoided if a



**Fig. 1** Upper gastrointestinal radiograph with water-soluble contrast in patient 1, showing leakage into the left pleural space.

nasogastric tube had been inserted prior to colonoscopy.

Three out of four patients described in the literature underwent emergency surgery resulting in a good outcome [2–4]; the only reported death was of a patient who had been managed conservatively [5].

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