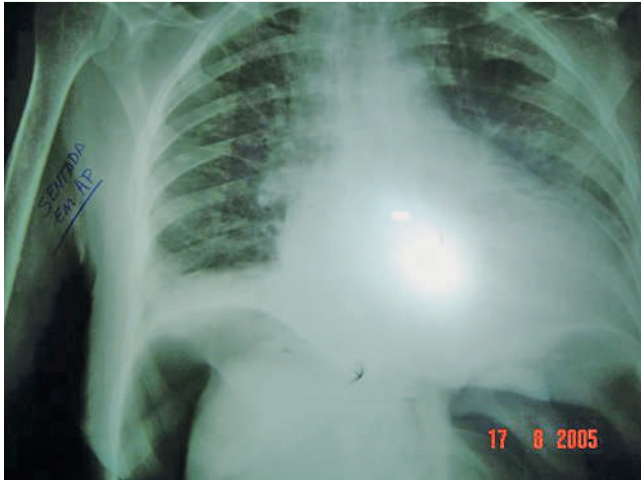
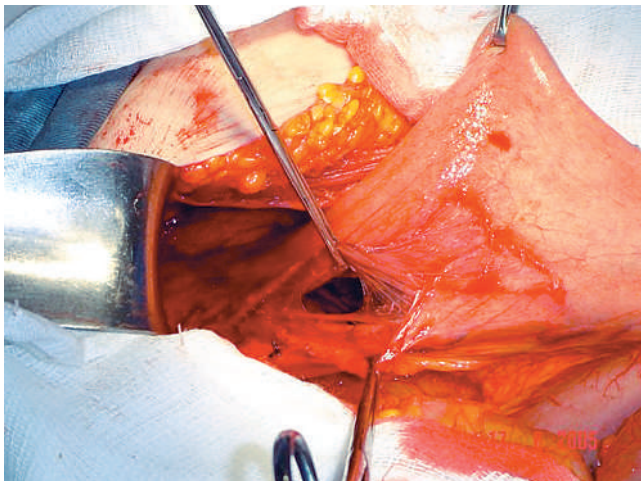


## Fatal complication of gastric tear at diagnostic colonoscopy with deep sedation



**Figure 1** Pneumoperitoneum seen at radiology.



**Figure 2** Operative finding of gastric disruption and serosal tear, indicating a pneumatic origin.

A 75-year-old woman presented for colonoscopy because of chronic abdominal pain. She also had coronary disease and hypertension.

Colonoscopy was carried out with the assistance of an anesthesiologist. After anesthesia with intravenous midazolam (2 mg) and propofol (40 mg) had been started, a nasopharyngeal catheter was inserted (oxygen flow rate, 4 L/min).

At the sigmoid colon, diverticula with no inflammatory signs were identified. At 2 minutes after anesthesia had been started, the patient was cyanosed and showed oxygen desaturation (below 85%). Bag-mask ventilation was initiated. After there was a response to this, abdominal distension was observed and the colonoscope was withdrawn.

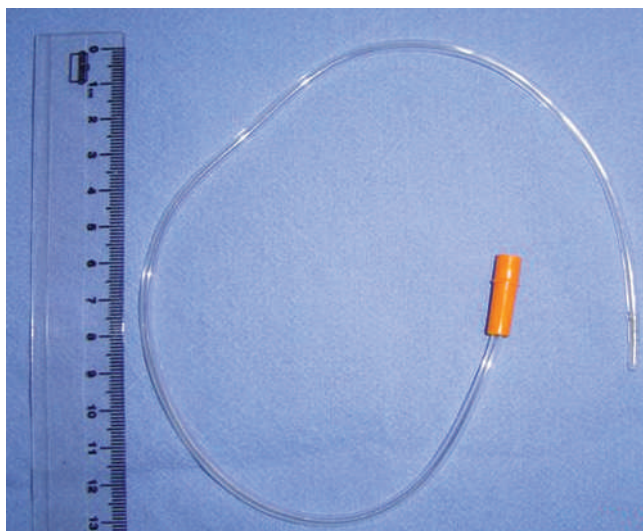
After flumazenil reversal, the patient recovered consciousness and complained of abdominal pain. Radiology revealed free subphrenic air (● **Figure 1**). At laparotomy there was no sign of colon perforation, but a 5-cm full-thickness tear was identified at the gastric corpus. A two-layer gastric closure was undertaken, and at the end of the operation the patient was sent to the intensive care unit.

After 48 h, heart failure and pulmonary congestion were diagnosed. The patient had respiratory failure on the fourth postoperative day and required mechanical ventilation. Cardiac arrhythmia preceded cardiogenic shock. The patient died on the 10th postoperative day, due to circulatory failure.

The purpose of sedation and analgesia is to relieve anxiety and pain and to diminish memory [1]. Oxygen administration reduces oxygen desaturation during endoscopy [2,3], and oxygen was delivered using a nasopharyngeal catheter 35 cm in length.

The finding of a tear in the center of a serosal tear in the stomach (● **Figure 2**) was not associated with adhesions. The patient had not vomited and no nasogastric tube was used. The serosal tear indicated a pneumatic origin. An over-inserted and misplaced nasopharyngeal catheter (● **Figure 3**) with a 4 L/min oxygen flow into the stomach could have been the cause [4–6], and must also have been the reason for the hypoxemia in the first place. The use of a twin-prong nasal oxygen set would have prevented this rare complication.

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**Figure 3** The nasopharyngeal catheter that was used during the procedure.

#### Bibliography

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