Letter

The complications of percutaneous endoscopic gastrostomy

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Percutaneous endoscopic gastrostomy (PEG) has become the primary procedure for the long-term nutrition of patients with swallowing disorders. It has been shown to be an effective method with a lower complication rate than surgical placement [1]. It can be performed in the intensive care unit, but complications may occasionally occur. The estimated incidence of major complications is 8% [2]. Abscess and wound infections are the most frequent complications, but necrotizing fasciitis, colon or small bowel injuries, gastrocolic fistula, duodenal hematoma, liver injury, gastric perforation, and catheter migration have also been described [3]. Unexpectedly, acute hemorrhage following PEG is rarely reported. In the literature, we found only one case report of a fatal retroperitoneal hemorrhage occurring 2 hours after a PEG [4]. In a series of 263 cases, Schurink and colleagues [2] described only two cases of intra-abdominal bleeding.

A 59-year-old man was admitted to our hospital with intracerebral hemorrhage. On day 40, a PEG was performed in the intensive care unit using the 'pull' technique as previously described [5]. The needle puncture of the stomach was accomplished only on the second attempt, although the rest of the procedure was completed uneventfully. The material used was the Bard® Fastrac™ Pull PEG Kit (Bard Access Systems, Salt Lake City, USA). One hour after the end of the procedure, the patient presented a tachycardia (120 beats per minute), with cardiovascular collapse (arterial pressure 70/50 mmHg). Physical examination revealed a distended abdomen. The hemoglobin concentration was 5.5 g/dL. Abdominal echography showed the presence of intraperitonal liquid. An emergency laparotomy was performed, revealing a massive hemoperitoneum due to active bleeding from a small vessel of the minor curvature. X-sutures were applied and the bleeding stopped. A gastrostomy was recreated at the end of surgery.

The massive hemoperitoneum we described is a rare complication in relation to its rapidity and its severity. We think that the initial, unsuccessful passage of the needle could have caused the gastric artery branch laceration. Indeed, such a mechanism of injuries has already been suggested as an explanation for a fatal retroperitoneum due to breaches in the splenic and superior mesenteric veins [4]. In the patient we described, prompt recognition could minimize morbidity.

Although generally considered safe, PEG can be associated with life-threatening bleeding, especially when multiple needle punctures have been made. It presents with unexplained postprocedure hypotension. Intensivists who are used to performing PEG should be aware of this complication because early recognition and treatment are essential.

Competing interests

The authors declare that they have no competing interests.

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PEG = percutaneous endoscopic gastrostomy.