

Endoscopic clip closure of penetrating stab wound to stomach

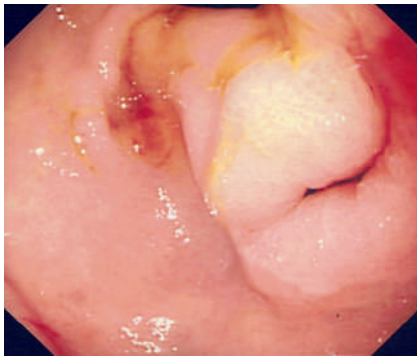


Fig. 1 Mucosal tear.

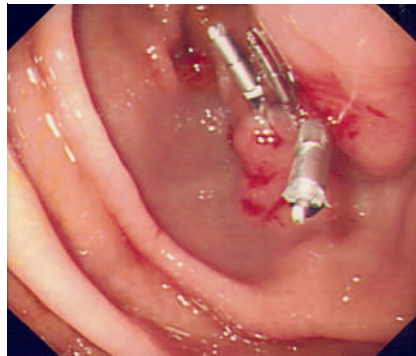


Fig. 2 Endoclips in situ.

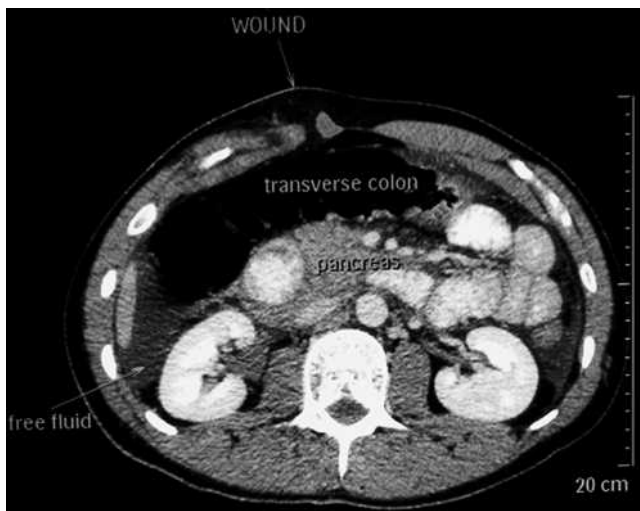


Fig. 3 Computer tomography scan showing abdominal wall perforation.



Fig. 4 Computer tomography scan showing fluid in abdominal cavity.

Gastric injuries are commonly seen in penetrating abdominal trauma [1], with incidence ranging from 7% to 20% [2]. In a study by Edelman et al. [3] of patients undergoing laparotomy for full-thickness gastric trauma, 492 out of 544 patients had simple repairs carried out. Mortality was 43% from a proximal stomach injury and 19% for more distal injuries ($P < 0.01$). A 22-year-old man was admitted following a stab injury to the anterior abdominal wall from a carving knife. He vomited a small quantity of fresh blood but remained hemodynamically stable with a normal hemoglobin. Amylase rose to 1000 U/l.

Endoscopy revealed a small, 0.5 cm penetrating wound on the anterior wall of the stomach along the lesser curve with some active bleeding (▶ **Fig. 1**). Three endoscopic clips (Quickclips2, Olympus EndoTherapy, Center Valley, Pennsylvania, USA) were successfully applied to achieve

hemostasis and closure (▶ **Fig. 2**). The posterior gastric wall was intact. Computer tomography scan confirming abdominal wall perforation (▶ **Fig. 3**) also revealed fluid in Morrison's pouch, edema of the head of the pancreas, and some free air anterior to the head of the pancreas (▶ **Fig. 4**).

The patient remained stable and conservative treatment of pancreatitis was considered appropriate in view of the absence of posterior gastric wall injury, the clinical state of the patient, and an alternative etiology for pancreatitis (alcohol). He received intravenous antibiotics for his wound and standard treatment for mild pancreatitis. Magnetic resonance cholangiopancreatography was not performed due to the presence of endoclips, and endoscopic retrograde cholangiopancreatography was unsafe due to the risk of perforation with a side-viewing scope. He was discharged from hospital 9 days

later. On clinic review he was well with no further pain or bleeding.

Endoclips can be used to close two mucosal surfaces without surgery. They have been used to close perforations caused by endoscopic procedures [4–7]. It is an alternative to surgical management in traumatic perforation as long as recognition is early and surgical back-up is available.

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