

Main symptoms include liver murmur in 33% of patients and liver thrill when the fistula exceeds 4 mm in diameter.⁷

Initial diagnosis can be made by B-mode and Doppler ultrasonography and is confirmed with a CT angiography or MRI angiography of the abdominal veins.

The portal vein is shown to be dilated, with increased velocity and turbulence with or without inversion of flow, as well as arterial waves, comparable with the adjacent hepatic artery, which may also be dilated. At times, a fistulous route can be found between the artery and the vein.²

Treatment type depends on the size, location and number of APFs (Table 1). Guzman et al.⁷ proposed a classification system for APFs, taking into account location, causation and size of the APF in order to determine the appropriate treatment, although this should be developed early in order to avoid the risk of development of PH. Both surgical and endovascular occlusion of the fistula can be attempted. Endovascular treatment has thus currently emerged as a minimally invasive reliable treatment option in such individuals.²

APFs often have a good prognosis, due to the minimal effects of a single APF and the effectiveness of current treatments.

In the case at hand, microcoils were used to embolise the fistula. The final outcome has been positive, with the patient being free of ascites.

Conflict of interest

None.

References

1. Vauthey JN, Tomczak RJ, Helmberger T, et al. The arterioportal fistula syndrome: clinicopathologic features, diagnosis, and therapy. *Gastroenterology*. 1997;113:1390–401.
2. Kumar A, Ahuja CK, Vyas S, et al. Hepatic arteriovenous fistulae: role of interventional radiology. *Dig Dis Sci*. 2012;57:2703–12.
3. Lu ZY, Ao JY, Jiang TA, Peng ZY, Wang ZK. A large congenital and solitary intrahepatic arterioportal fistula in an old woman. *World J Gastroenterol WJG*. 2009;15:1656–9.
4. Preger L. Hepatic arteriovenous fistula after percutaneous liver biopsy. *Am J Roentgenol Radium Ther Nucl Med*. 1967;101:619–20.
5. Okuda K, Musha H, Nakajima Y, et al. Frequency of intrahepatic arteriovenous fistula as a sequela to percutaneous needle puncture of the liver. *Gastroenterology*. 1978;74:1204–7.
6. Gomez-Valero JA, Sardi J, Vilaseca J, Perez Lafuente M, Malagelada JR. Pancreatitis and haemobilia due to arterioportal fistula after percutaneous liver biopsy resolved by selective arterial embolization. *Eur J Gastroenterol Hepatol*. 2001;13:727–30.
7. Guzman EA, McCahill LE, Rogers FB. Arterioportal fistulas: introduction of a novel classification with therapeutic implications. *J Gastrointest Surg*. 2006;10:543–50.
8. Iwaki T, Miyatani H, Yoshida Y, Matsuura K, Suminaga Y. Gastric variceal bleeding caused by an intrahepatic arterioportal fistula that formed after liver biopsy: a case report and review of the literature. *Clin J Gastroenterol*. 2012;5:101–7.
9. Cacho G, Abreu L, Calleja JL, et al. Arterioportal fistula and hemobilia with associated acute cholecystitis: a complication of percutaneous liver biopsy. *Hepatogastroenterology*. 1996;43:1020–3.

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Typical but less frequently recognized findings in laparoscopic adjustable gastric band slippage



Hallazgos típicos pero menos reconocibles en deslizamiento de banda gástrica ajustable laparoscópica

Sr. Director,

A 37-year-old woman with a laparoscopic adjustable gastric band (LAGB) placed 3 years earlier presented with a 1-day history of sudden onset vomiting, food intolerance and abdominal pain. Physical examination revealed epigastric tenderness and laboratory tests had no significant

abnormalities. Abdominal X-ray showed a dislodged gastric band with an abnormal angulation and annular appearance (Fig. 1A). Upper gastrointestinal endoscopy revealed an enlarged eroded gastric pouch (Fig. 2A) with food stasis and an angulated constriction in the distal gastric body, easily traversed (Fig. 2B and C). Barium swallow confirmed the gastric band slippage with gastric pouch enlargement and no progression of oral contrast material into the distal stomach (Fig. 1B). The gastric band was surgically removed (Fig. 1C).

LAGB is an effective, safe and widely used bariatric surgery for treatment of morbid obesity.^{1,2} LAGB is positioned 1–2 cm distal to the gastroesophageal junction, creating a gastric pouch approximately 20–30 mL in size.^{3,4} A correctly positioned LAGB has a rectangular shape and an oblique angulation in the left upper quadrant on frontal abdominal X-ray.¹ LAGB slippage is the most commonly

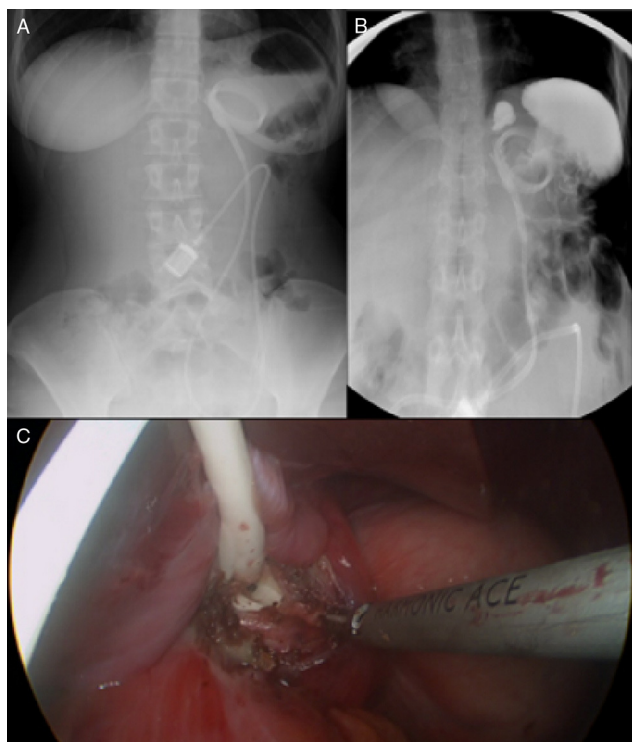


Figure 1 (A) Abdominal radiograph showing an enlarged gastric pouch with an air-fluid level and a dislodged gastric band with an abnormal angulation and annular appearance; (B) barium swallow depicting gastric band slippage with gastric pouch enlargement with retention of oral contrast; (C) laparoscopic image showing removal of the gastric band.

reported complication of LAGB placement, affecting 2–4% of patients.^{3,4} LAGB slippage consists of prolapse of the distal stomach upward through the band, leading to eccentric pouch enlargement and constriction with partial

or complete obstruction at the level of the band.^{1,2,4} While abdominal X-ray may reveal an air-fluid level in the gastric pouch, gastric obstruction and malposition of the band, endoscopy may depict an enlarged pouch, reflux esophagitis, gastritis, ulcers and necrosis.^{1,4,5} This report outlines the typical findings in gastric band slippage allowing clinicians to recognize similar aspects leading to early recognition of this complication and avoiding a potential deleterious delay in the institution of the appropriate management.

References

1. Pieroni S, Sommer EA, Hito R, Burch M, Tkacz J. The “O” sign, a simple and helpful tool in the diagnosis of laparoscopic adjustable gastric band slippage. *Am J Roentgenol*. 2010;195:137–41.
2. Thornton CM, Rozen WM, So D, Kaplan ED, Wilkinson S. Reducing band slippage in laparoscopic adjustable gastric banding: the mesh plication pars flaccida technique. *Obes Surg*. 2009;19:1702–6.
3. Ward M, Prachand V. Surgical treatment of obesity. *Gastrointest Endosc*. 2009;70:985–90.
4. Elder KA, Wolfe BM. Bariatric surgery: a review of procedures and outcomes. *Gastroenterology*. 2007;132:2253–71.
5. ASGE Standards of Practice Committee, Anderson MA, Gan SI, Fanelli RD, Baron TH, Banerjee S, et al. Role of endoscopy in the bariatric surgery patient. *Gastrointest Endosc*. 2008;68:1–10.

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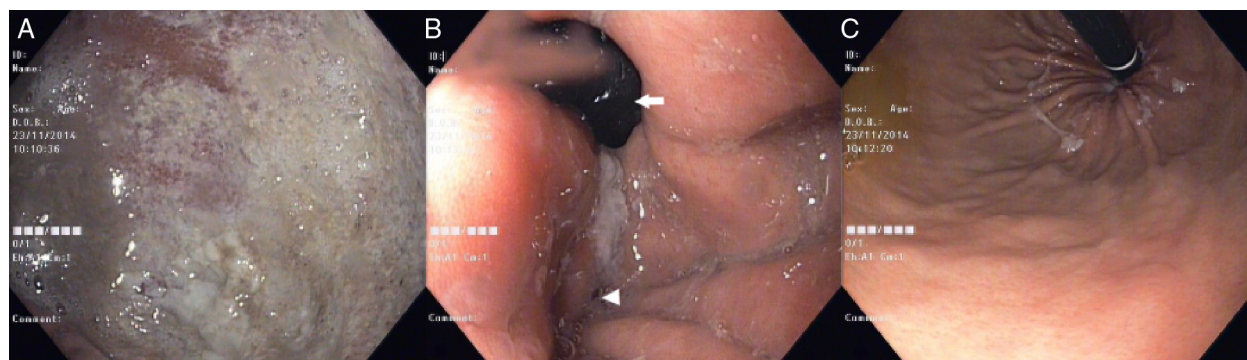


Figure 2 (A) Endoscopic image revealing an enlarged gastric pouch with mucosal erosions; (B) endoscopic image revealing herniation of the distal stomach (arrow) proximal to a narrowed impression (arrowhead) in the distal gastric body secondary to band displacement; (C) endoscopic image after retroflexion of the scope in the antrum, showing an easily traversed angulated constriction in the distal gastric body.