Intraoperative transgastric ERCP after a Roux-en-Y gastric bypass

Roux-en-Y gastric bypass (RYGB) is among the favorite surgical approaches to treating morbidly obese patients, but leads to an increased incidence of cholecocolithiasis. Per-oral endoscopic retrograde cholangiopancreatography (ERCP) represents a major challenge in this situation [1,2]. ERCP through a surgically placed gastrostomy has been proposed as an alternative route for endoscopic access [3–5]. We report a case of endoscopically treated cholecocolithiasis via a transgastric approach during laparoscopic cholecystectomy in a RYGB patient.

A 30-year-old woman underwent a RYGB procedure. Preoperative ultrasonography identified only hepatic steatosis. At 7 months after surgery and a 38 kg weight loss, abdominal ultrasound was performed because of noncharacteristic abdominal pain. Cholelithiasis was identified, and a laparoscopic cholecystectomy was planned.

Intraoperative cholangiography revealed common bile duct (CBD) stones, and only partial ductal clearance was achieved (Figure 1). A combined laparoscopic-endoscopic approach was attempted. A small gastrotomy with a purse-string suture was performed on the anterior wall. A duodenoscope was introduced through a 15 mm trocar on the upper left quadrant and through the gastrotomy (Figure 2a and b). The duodenum was occluded to prevent air passage and small bowel distension. Endoscopic sphincterotomy and stone extraction were carried out according to standard techniques (Figure 3 and Figure 4). Occlusion cholangiogram confirmed CBD clearance. There was no procedure-related complication, and the patient was discharged on the second postoperative day. The patient is doing well at 8-months' follow up.

Transgastric laparoscopic-assisted ERCP in the management of cholelithiasis in RYGB patients is technically feasible and apparently not associated with a higher complication rate. Its one-step nature may reduce hospital stay and costs.

Figure 1 Intraoperative cholangiography after attempt to remove common bile duct stones.

Figure 2 a, b Duodenoscope introduced through a 15 mm trocar placed on the upper left quadrant and through the gastrotomy.

Figure 3 Duodenoscope and sphincterotomy in place, immediately before sphincterotomy.

Figure 4 Removal of stone fragments with the extractor balloon from the common bile duct.

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