

Endoscopic Removal of Migrated Laparoscopic Adjustable Gastric Band Using a Soehendra Lithotripter® and a Guidewire

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Abstract

Laparoscopic adjustable gastric banding is an effective and popular treatment for morbid obesity. However, migration of the gastric band into the gastric lumen could be a late complication of the procedure. Migrated gastric bands' removal from the stomach is mandatory to preclude adverse events. The treatment of band migration has classically been surgical. Nonetheless, endoscopic removal is feasible traditionally requiring expensive or specialized equipment, which is not always readily available. We present a case of successfully endoscopic removal of migrated laparoscopic adjustable gastric banding using a Soehendra Lithotripter® and standard guidewire. Since this method demonstrates that common endoscopic devices such as lithotripters and biliary wires can be used to transect an elastic band, it is a suitable option to enable the successful endoscopic removal of migrated laparoscopic adjustable gastric banding and sparing the patient from undergoing an invasive and expensive surgical procedure.

Keywords: Endoscopy; Bariatric surgery

Abbreviations

LAGB: Laparoscopic Adjustable Gastric Banding

Case Report

Laparoscopic adjustable gastric banding (LAGB) is an effective treatment and one of the most popular minimally invasive restrictive procedures for morbid obesity. However, the global trends from 2003 to 2011 showed a declining use from 24.4% to 17.8% [1]. Migration of the gastric band into the gastric lumen, a late complication of LAGB, has a lifetime incidence of 1.4% [2]. Migrated gastric bands' removal from the stomach is mandatory to preclude intra-abdominal infection and acute intestinal obstruction. The treatment of band migration has classically been surgical. Endoscopic removal is feasible, especially if the gastroscopy shows a penetration over 1/2 of the circumference. If less than 1/2 of the band is eroded, band migration can be induced by cutting the gastric mucosa over the band or using temporary self-expanding plastic stents [3]. Different treatment options to remove a migrated gastric band exist that may provide similar results. However, they are generally more expensive, or require specialized equipment [4-6]. We present a case of successfully endoscopic removal of migrated LAGB using a Soehendra Lithotripter® and standard guidewire. Since this method demonstrates that standard instruments such as lithotripters and biliary wires can be used to transect an elastic band, it is a suitable option to enable the successful endoscopic removal of migrated LAGB and sparing the patient from undergoing an invasive and expensive surgical procedure.

A 49-year-old female presented with recent epigastric pain. She had undergone LAGB 5 years earlier and lost 43% of initial bodyweight. Gastroscopy and fluoroscopy showed band migration into gastric lumen. The port system was surgically removed under local anesthesia

and the connecting tube was cut. Endoscopic removal of the band was performed using a Soehendra® lithotripter (SLH-1, Wilson-Cook) (Figure 1) and a guidewire (Amplatz Super Stiff™, Boston Scientific). The guidewire was introduced into the working channel, passed around the band and retracted. Both ends of the wire were then introduced into the lithotripter external cable and passed into the tourniquet of the handgrip. The lithotripter was advanced into the stomach and, by twisting its handle; the band was cut under direct vision, and was then removed with gentle traction through the mouth using a polypectomy snare (Figure 2).

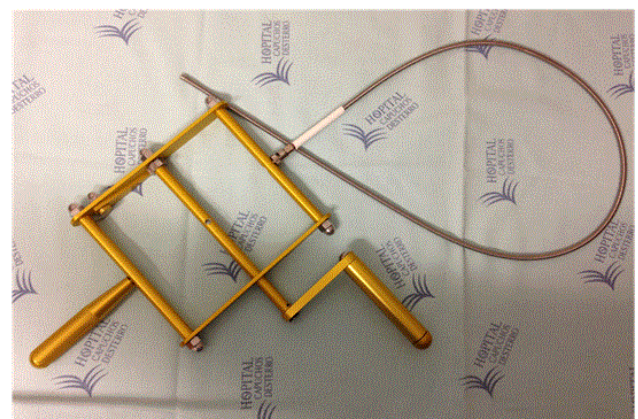


Figure 1: External cable and tourniquet of Soehendra® lithotripter (SLH-1, Wilson-Cook).

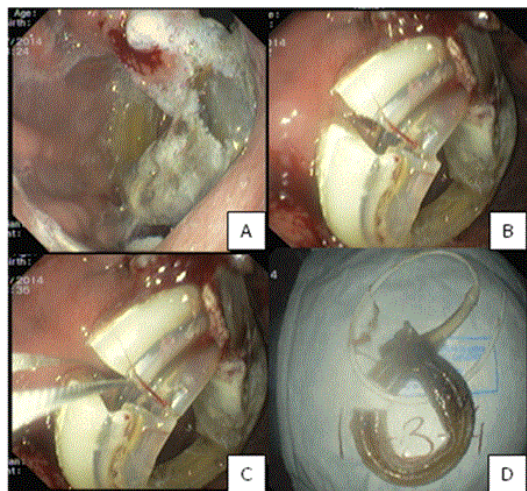


Figure 2: Endoscopic gastric band removal: A) partially migrated gastric band in the gastric fundus; B) gastric band cut; C) gastric band removal using a polypectomy snare; D) gastric band completely removed.

Liquid feeding was initiated 6 hours later and the patient was discharged the day after.

Patient remains asymptomatic and no complications have been reported after five months of follow-up.

As described previously [7,8], a surgery may be avoided resorting to this minimally invasive procedure, using a simple technique and common endoscopic devices for band removal after LAGB migration.

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