Long-term Laparoscopic Hiatal hernia repair and Re-sleeve after a Duodenal Switch

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Background: A 51 years-old female had BMI-44 had a open Duodenal Switch (ODS) in 2004. She was admitted 6 years later with a symptomatic hiatal hernia (HH), gastro-esophageal reflux (GER) confirmed by endoscopy and a retained antrum was also present. Technique: Laparoscopic HH (LHH) and re-gastrectomy was carried out. Post-op: Satisfactory

Key Words: Hiatal Hernia; Gastric Sleeve; Hiatal sleeve; Re-gastrectomy. Duodenal switch

Introduction
Hiatal Hernia (HH) is common and is often asymptomatic among bariatric patients. It can be associated with gastro-esophageal reflux disease (GERD) that decreases the quality of life, reduce weight loss or re-gain after surgery [1]. GERD affects more than 15% of patients operated for obesity, and its presence increases significantly with higher BMI [2].

Duodenal Switch (DS) is a hybrid complex technique, consisting on the formation of a Vertical Sleeve-forming Gastrectomy (VSFG) plus a Biliary-Pancreatic Diversion (BPD) and is the most effective procedure in term of loss weight of all bariatric operations. We present a patient with severe GERD and weight re-gain six years after an open DS. This video shows the laparoscopic repair of HH (tube reduction and repair of pillars) and a re-gastrectomy.

A video clinical case
A 51 years-old female, asymptomatic patient except for obesity, BMI-44 was operated in 2004 by open DS technique and had: 1) liver biopsy, 2) cholecystectomy, 3) Appendicectomy, 4) GV without antrectomy and 5) DBP with CC -65 cm, BPL-250 cm and 185 cm-AL diversion

Six years later she had lost 56 kg, had a BMI-26 ("expected" BMI-29), %EWL-80%,% %EBMIL-95%,% “expected” %EBMIL-126%, meaning that she had lost 26% more than expected .

However, she re-gained up to BMI-31 and was afflicted for 3 months with reflux symptoms and in a study showed reflux esophagitis, retained antrum and important HH.

The operation was done http://youtu.be/peYLRbolv1YI by laparoscopy. Pneumoperitoneum was done with a Veress needle and four 5 mm ports were introduced, one 10 mm for the camera and a 12 mm for stapling. The sleeve was identified and laborious ultrasonic dissection exposed the HH sac, which was reduced into the abdomen with traction Penrose drain around the esophagogastric junction (EGJ).

The left and right crus of the diaphragm were approximated without tension with 3 double-loops of silk sutures 2/0. The intra-abdominal stomach was fixed to the diaphragm with three silk sutures. Clips markers were applied on these sutures.

The antrectomy of the dilated segment was done with three applications of lineal staplers starting at the pylorus. She was discharged asymptomatic on POD2

Fig.1.Pre-op Fig.2.Post-op1 Fig.3.Post-op2
The postoperative radiograph shows the clips attaching the stomach to the abdominal hiatus.

Two years later she weighs 82 kg, BMI = 26 and without symptoms.

Discussion

Closure diaphragm crus has been recommended in cases symptomatic HH after of adjustable rings and gastric bypass [3,4]

El cierre de pilares diafragmáticos ha sido recomendado en casos de HH sintomática tras anillas ajustables y tras la derivación gástrica [3,4]

VSFG with closure of the crus has been recommended, for the treatment of GERD and HH in morbidly obese to correct obesity and GERD [5] as well as in emergencies situations of fundus necrosis in patients with HH and gastric ring [6].

The association of HH and esophageal motor impairment are risk factors for failure in gastric banding [7]. Crus closure with or without prosthetic material are indicated in LVG is GER is present [2].

Re-gastrectomy have been recommended [8,9] in cases of weight re-gain, and we perform systematically an antrectomy in all primary LVG without having gastric emptying problems [10].

La re-gastrectomía han sido recomendada [8,9] en casos de re-ganancia de peso, y nosotros la hacemos antrectomía de forma sistemática en todas las GVL primarias sin haber tenido problemas de vaciado [10].

By removing the fundus in the original transaction, no tissue is available for fundoplication (Dor or Toupet-type) yet gastric acid production is significantly reduced. In extreme cases a RNY gastric bypass may be needed [1]

References:


