

## Case Report

# Hiatal hernia repair plus gastric bypass in obese patient

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## ABSTRACT

Weight control is one of the main recommendations for medical treatment in patients with obesity and GERD disease symptomatology. The advent of bariatric surgery, as well as minimally invasive procedures for weight control and antireflux surgery have changed the ideal treatment in patients with obesity and gastroesophageal reflux disease. Symptomatology is increased with a sudden increase in intra-abdominal pressure, and studies suggest that a BMI greater than 30 kg/m<sup>2</sup> is a predisposing factor for the appearance of hiatal hernia and esophagitis 1.

## INTRODUCTION

Considering that hiatal hernia is an anatomical condition, defined as the protrusion of the stomach or some non-esophageal structure through the esophageal hiatus 2. Obesity is currently considered one of the main and most important health problems worldwide, the WHO considers it a global epidemic and classifies it as the second cause of preventable death after smoking 3. Currently for the treatment of obesity there are different types of surgical procedures such as adjustable gastric banding, vertical gastrectomy, gastric bypass and biliopancreatic diversion.

## METHODS

To report the clinical case of a patient with a diagnosis of hiatal hernia type I plus obesity grade 3, arterial hypertension and diabetes

mellitus, its surgical resolution by laparoscopy through esophageal hiatus and gastric bypass, as well as its postoperative follow-up.

## RESULTS

53-year-old female, with a chronic degenerative history of obesity grade 2 BMI 35, diabetes mellitus and hypertension, as well as controlled bronchial asthma, social alcoholism and smoking abandoned 3 years ago. He started his condition 2 years before with symptoms such as heartburn, regurgitation, clinical symptoms refractory to medical treatment, he went for evaluation finding a patient with chest with rhythmic heart sounds, well ventilated lung fields, central obesity, globose abdomen at the expense of adipose panniculus, painless on superficial palpation and normal peristalsis deep peristalsis.

A study protocol is initiated requesting complementary studies gastro duodenal esophageal series with report of small reducible hiatal hernia (Fig. 1) and upper gastrointestinal endoscopy with evidence of Z line with irregular edges, mucosal ruptures some larger than 5 mm involving mucosal folds, some covered with whitish exudate at the esophageal-gastric junction, gastric body at retro vision maneuver, open diaphragmatic pillars are observed with passage of gastric folds to the thorax, concluding hiatal hernia type I and erosive esophagitis grade B of Los Angeles (Fig. 2).

Surgical protocol for hiatal hernia repair and gastric bypass was performed electively.

## DISCUSSION

It was decided to perform laparoscopic surgery, finding during the surgical procedure type I hiatal hernia. The hernial content (gastric fundus) was reduced and esophageal hiatus dissection was performed (Fig. 3).

Section of short vessels, adequate dissection of left pillar and right pillar of the diaphragm, dissection of minor curvature releasing gastro hepatic and retro gastric omentum towards the angle of His, thus obtaining the release of gastric fundus without tension to its mobility, diaphragmatic pillars are confronted with simple intracorporeal stitches non absorbable suture (Fig. 4).

Gastric resection and creation of the gastric reservoir is started with 3 shots of linear stapler, the construction of the Roux loop is performed with the first anastomosis at 100 cm with linear stapler, ascending the distal end to the gastric reservoir before the colic and the gastrojejunal anastomosis is performed at the lateral side with linear stapler. Second latero-lateral anastomosis with linear stapler at 50 cm from the gastrojejunal anastomosis.

Hermetic closure of the anastomosis is verified by methylene blue test by orogastric tube. Mesenteric defects were closed, Blake drainage was placed towards the anastomosis area, and the surgical event was terminated. The patient had a favorable immediate postoperative evolution, the following day she was started on a liquid diet, adequately tolerated orally, without reflux data. The patient was discharged on the second post-surgical day. With adequate outpatient follow-up.

## CONCLUSION

Hiatal hernias are common acquired anatomical conditions, generally identified by symptoms associated with gastroesophageal reflux, due to protrusion of a gastric portion through the esophageal hiatus<sup>5</sup>. It is recommended that patients diagnosed with hiatal hernia undergo surgery, due to the morbidity and mortality related to complications<sup>5</sup>. In accordance with the recommendations of the consensus of the National Institute of Health of the United States in 1991, surgical treatment of obesity was rapidly disseminated. Indicating surgical treatment for patients with a Body Mass Index (BMI) > 40kg/m<sup>2</sup> and for patients with a BMI > 35kg/m<sup>2</sup>, but with comorbidities associated with obesity<sup>4</sup>.

According to a Cochrane systematic review (2009) determined that bariatric surgery procedures generate greater weight loss compared to conventional treatment for grade 1 obesity, as well as in patients with higher degrees of obesity there was evidence of improvement in comorbidities such as hypertension, diabetes mellitus and quality of life<sup>6</sup>. Gastric Bypass is the operation performed in 49% of all interventions in the world and Adjustable Gastric Banding in 42%, although the use of gastric sleeves has increased, long-term studies are still lacking to demonstrate its superiority over other techniques<sup>7</sup>.

Gastric bypass consists of creating a gastric reservoir at the expense of the lesser curvature, of no more than 30 ml, a Roux-en-Y gastrojejunal anastomosis, dysfunctionalizing the distal stomach which remains in situ. Importance should be given to technical aspects such as the size of the gastric reservoir, diameter of the gastro-jejunal anastomosis of 15 mm or less and the length of the dysfunctionalized loop. The usual food loop length ranges from 75 to 150 cm. in length 5. It is essential to obtain a complete preoperative protocol in patients who will undergo a bariatric procedure, which requires an assessment by nutrition, psychiatry, pneumology, gastroenterology, cardiology and special studies such as esophagogastroduodenal series or endoscopy.

And explain to the patient in detail the possible complications inherent to the underlying pathology and those related to the surgical procedure, among which are anastomotic leakage, which is the most feared, occurring in up to 0.6-4.4%, postoperative bleeding and in all patients with obesity the risk of thromboembolic phenomena is increased 8,9.

In the patient's case, a complete preoperative protocol was carried out, with assessment by nutrition, psychiatry, gastroenterology and bariatric surgeon. It was decided to perform gastric bypass and esophageal hiatus repair with a favorable postoperative evolution.

## CONFLICTS OF INTERESTS

The authors have no conflict of interest.

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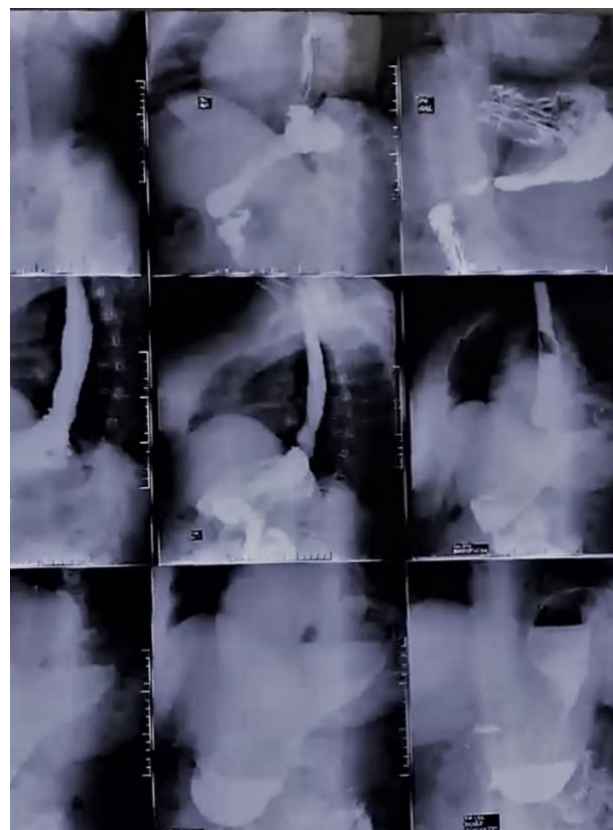
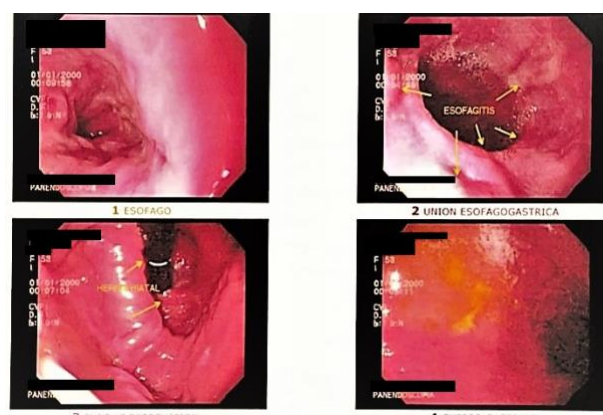
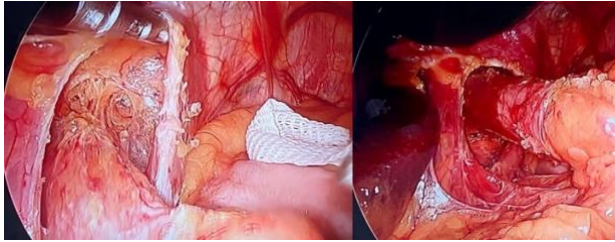


FIG. 1. Gastroduodenal esophagus series.



## FIGURES

**FIG. 2.** Upper gastrointestinal endoscopy showing type I hiatal hernia and erosive esophagitis.



**FIG 3.** Dissection of diaphragmatic pillars for coping with pillars.



**FIG. 4.** Coping with diaphragmatic pillars.