

ABCDDV/1045

ABCD Arq Bras Cir Dig Letter to the Editor
2014;27(3):228-228

DYSPHAGIA AFTER HIATAL HERNIA CORRECTION

Disfagia após correção da hérnia de hiato

Bruno **ZILBERSTEIN**, Juliana Abbud **FERREIRA**,
Marnay Helbo de **CARVALHO**, Cely **BUSSENS**,
Arthur Sérgio **SILVEIRA-FILHO**, Henrique **JOAQUIM**,
Fernando **RAMOS**

From Gastromed - Instituto Zilberstein, São Paulo, SP, Brazil

Correspondence:

Bruno Zilberstein
brunozilb@uol.com.br

Financial source: none
Conflicts of interest: none

Received for publication: 15/02/2013
Accepted for publication: 22/04/2014

INTRODUCTION

The gastroesophageal reflux disease is chronic and common condition that affects about 10% of the population in general²² and corresponds to about 75% of esophageal disorders, with a progressive increase in incidence over the years¹⁸. Surgical treatment is permanent, in most cases, since the fundoplication restores the competence of the lower esophageal sphincter and the hiatoplasty reduces and treats the associated hiatal hernia. This is old procedure, firstly described in 1956 by Nissen through laparotomy and in 1991 by laparoscopy done by D'Allemaigne. The laparoscopic surgical treatment proved to be better over the years for its significant improvement of postoperative pain, shorter hospital stay, faster return to activities and better aesthetic results^{4,8,13,30}.

Currently there is no doubt that surgical treatment of reflux disease by laparoscopy is safe and effective, with success rates above 85%^{2,6,7,11,12,17,21,26,28} being considered the "gold-standard" of laparoscopic surgery. However, some complications and failures have been reported in postoperatively^{3,9,16,23,24}, among them the stenosis of the esophagogastric junction, dysphagia due to the very "tight" valve or fundoplication performed with the gastric body or its migration to the mediastinum. Additionally, recurrent gastroesophageal reflux valve migration resulting in total or partial dehiscence of suture may occur. However, not always these anatomic alterations produce symptoms of reflux disease²⁰, but atypical ones.

It is the aim of this study is to describe and report the diagnostic methods employed in the occurrence of persistent postoperative dysphagia after laparoscopic surgery for repair of hiatal hernia and reflux disease, as well as the therapeutic approach employed in these cases.

CASES REPORT

Three patients, two men aged 33 and 53 years and a woman aged 24 who underwent four years, two years and eight months before the surgical treatment of reflux disease, who developed persistent dysphagia were studied. All had undergone multiple postoperative endoscopies, with no conclusive diagnosis. So, it was indicated and

performed in all cinedeglutogram, which revealed difficulty in emptying the barium contrast to the stomach (Figure 1), with formation of diverticular appearance formation on the gastric fundus image, emptying cascade like to the stomach (Figure 2).

All were re-operated on, again by laparoscopy, and was recognized that de Nissen fundoplication was done with the gastric body instead the fundus. The operation was to undo the fundoplication and rebuild a new one Lind or Toupet (270°) partial fundoplication.



FIGURE 1 - Emptying difficulty of contrast into the stomach



FIGURE 2 - Diverticular formation on fundus level with cascade-like emptying image into the stomach

All patients recovered uneventfully and were discharged in 48 hours. The evolution in two years later showed disappearance of dysphagia symptoms and absence of gastroesophageal reflux.

DISCUSSION

After laparoscopic or conventional surgical correction of gastroesophageal reflux some complaints are common like postprandial bloating, difficulty on burp and vomit, and sometimes disphagia^{1,10,14,25}. In most cases, dysphagia symptom is intermittent and tends to disappear within 30 days after the procedure, without the need for specific or new intervention^{15,19}.

However, in case of persistent dysphagia, especially when associated with weight loss or dysphagia also important to liquids, diagnostic investigation must be done³⁰. Persistent dysphagia occurs in approximately 3% of cases after surgical treatment of GERD by laparoscopy. It often leads to loss of quality of life, weight loss and of course a lot of dissatisfaction among patients^{5,29}.

Postoperative investigation should include endoscopy and always contrasted study of the upper digestive tract, preferably with cineradiography of the esophagus, stomach and duodenum. Endoscopy not always points to the real cause of dysphagia, but can prove difficulties in passing the endoscope from the esophagus into the stomach or a twisted or migrated fundoplication to the chest. The dynamic contrast radiographic study, evaluating the anatomy and function of the upper digestive tract, aids to recognize the anatomical and functional changes of the esophagogastric junction. The normal radiological appearance, in the case of successful antireflux operation, can show the rapid passage of contrast material from the esophagus to the stomach without failure or retentions, the preview image of the fundoplication with air bubble and absence of gastroesophageal reflux on technical maneuvers²⁰. In the case of anatomical changes of the transition they are easily evidenced by the difficulty of oesophageal emptying, upstream dilation of the esophagus with functional achalasia or the formation of gastric diverticulum on fundoplication.

The anatomical reasons that justify the persistent postoperative dysphagia are the realization of tight hiatoplasty and/or fundoplication and bad positioning of the valve made erroneously with the body of the stomach rather than with the fundus on trying to perform a 360° valve²⁷. In the studied cases were observed diverticula formation just below the transition with cascade-like emptying. During the examination can also be noticed the correlation of the act of swallowing with the clinical picture, referring or not dysphagia and pain upon swallowing.

Once diagnosis is made, it is appropriate to indicate surgical correction of the defect, that can also be performed by laparoscopy; cavity inventory often reveals the anatomical cause of dysphagia.

According to Lafullarde et al.¹⁶ reoperation for failure of the fundoplication occurred in 15% of patients due to postoperative paraesophageal hiatal hernia, severe and persistent dysphagia and recurrence of GERD symptoms.

In fundoplication improperly made with the gastric body, cineradiography and/or videodeglutogram is important to guide the diagnosis.

It can be concluded that severe and persistent postoperative dysphagia in antireflux surgery is a symptom that may indicate failure in the operation and should be carefully evaluated with endoscopy and dynamic contrast radiological examinations; reoperation with valve reconstruction is indicated to control symptoms and re-treat GERD.

REFERENCES

- Anvary M, Allen Cj. Prospective evaluation of dysphagia before and after laparoscopic Nissen fundoplication without routine division of short gastrics. *Surg. Laparosc. Endosc.* 1996; 6:424-29.
- Cathey RP, Henry LG, Bielefield MR – Laparoscopic Nissen fundoplication for gastroesophageal reflux disease: clinical experience and outcome in first 100 patients. *Surg Laparosc Endosc* 1996;6:430-433.
- Collet D, Cadière GB – Conversions and complications of laparoscopic treatment of gastroesophageal reflux disease. *Am J Surg* 1995;169:622-626.
- D'Allemagne B, Weerts JM, Jhaes C, et al – Laparoscopic Nissen Fundoplication: preliminary report. *Surg Laparosc Endosc* 1991; 1:138-139.
- Dallemagne B, Weerts J, Markiewicz S, Dewandre JM, Wahlen C, Monami B, et al. Clinical results of laparoscopic fundoplication at ten years after surgery. *Surg Endosc.* 2006;20(1):159-65.
- Demeester Tr, Bonavina L, Albertucci M. Nissen fundoplication for gastro-esophageal reflux disease. Evaluation of primary repair in 100 consecutive patients. *Ann. Surg.* 1986; 204:9-40.
- Gama-rodrigues Jj. Hérnia hiatal por deslizamento. Esofagofundogastropexia associada à hiato-plastia - avaliação clínica, morfológica e funcional. São Paulo, 1974. (Tese - Livre-Docência - Faculdade de Medicina da Universidade de São Paulo).
- Geagea T – Laparoscopic Nissen's fundoplication: preliminary report on ten cases. *Surg Endosc* 1991; 5:170-172.
- Hainaux B, Sattari A, Coppens E, Sadeghi N, Cadière G. Intrathoracic migration of the wrap after laparoscopic Nissen fundoplication: radiologic evaluation. *AJR Am J Roentgenol* 2002;178:859-62.
- Hallerbäck B, Glise H, Johansson B. Laparoscopic Rosetti fundoplication. *Scand. J. Gastroenterol.* 1995;30 Suppl 208:58-61.
- Hinder Ra, Filipi Cj. The technique of laparoscopic Nissen fundoplication. In: Paula AI, Hashiba K, Bafutto M. Eds. *Cirurgia videolaparoscópica*. Goiânia, Ed. Independente, 1994;85-87.
- Hunter JG, Trus TL, Branum GD, et AL – a physiologic approach to laparoscopic fundoplication for gastroesophageal reflux disease. *Ann Surg* 1996;6:673-687.
- Jamielson A – Laparoscopic antireflux surgery. *Ann Surg* 1992; 200:148-150
- Jamieson Gg, Watson Di, Britten-jones R, Mitchell Pc, Anvari M. Laparoscopic Nissen fundoplication. *Ann. Surg.* 1994;220:137-45.
- Kamolz T, Bammer T, Pointner R. Predictability of dysphagia after laparoscopic Nissen fundoplication. *Am J Gastroenterol.* 2000 Feb;95(2):408-414.
- Lafullarde T, Watson DI, Jamieson GG, Myers JC, Game PA, Devitt PG. Laparoscopic Nissen fundoplication: five-year results and beyond. *Arch Surg.* 2001 Feb;136(2):180-184.
- Nano M, Redivo L, Fonte G, et AL – One year follow-up results in the surgical treatment of gastroesophageal reflux disease. *Int surg* 1996;81:27-31.
- Ollyo JB, Monnier P, Fontollet C, et al – The natural history, prevalence and incidence of reflux esophagitis. *Gullet* 1993; 3:3-10
- Pessaux P, Arnaud JP, Delattre JF, Meyer C, Baulieux J, Mosnier H. Laparoscopic antireflux surgery: five-year results and beyond in 1340 patients. *Arch Surg.* 2005 Oct;140(10):946-951.
- Reibschied S et al. - Complicações pós-operatórias de cirurgia de Nissen laparoscópica. *Rev Imagem* 2007;29(3):97-100
- Rosenthal R, Peterli R, Guenin MO, von Flüe M, Ackermann C. Laparoscopic antireflux surgery: long-term outcomes and quality of life. *J Laparoendosc Adv Surg Tech A* 2006;16:557-61.
- Stein HJ, Barlow AP, DeMeester TR, et AL – Complications of gastro-esophageal reflux disease. *Ann Surg* 1992; 216:35-43
- Thoeni RF, Moss AA. The radiographic appearance of complications following Nissen fundoplication. *Radiology* 1979;131:17-21.
- Trinh TD, Benson JE. Fluoroscopic diagnosis of complications after Nissen antireflux fundoplication in children. *AJR Am J Roentgenol* 1997;169:1023-8.
- Watson Di, Jamieson Gg, Devitt Pg, et al. Changing strategies in the performance of laparoscopic Nissen fundoplication as a result of experience with 230 operations. *Surg. Endosc.* 1995;9:961-66a.
- Weerts Jm, Dallemagne B, Hamoir E, et al. Laparoscopic Nissen fundoplication: detailed analysis of 132 patients. *Surg. Laparosc. Endosc.* 1993; 3:359-64.
- Wills VL, Hunt DR. Dysphagia after antireflux surgery. *Br J Surg.* 2001;88(4):486-99.
- Zaninotto G, Anselmino M, Costantini M, et al – Laparoscopic treatment of gastro-esophageal reflux disease: indications and results. *Int Surg* 1995; 80:380-385.
- Zilberstein B, Eshkenazy R, Pajeci D, Granja C, Brito ACG. Laparoscopic mesh repair antireflux surgery for treatment of large hiatal hernia. *Diseases of the Esophagus* (2005) 18, 166-169
- Zilberstein B, Ramos AC, Sallet JA, Engel FC, Tanikawa DYS. Esofagofundoplicatura videolaparoscópica por técnica mista. *Rev Col Bras Cir – Vol XXVI - nº6 - 345*