

**VIDEOLAPAROSCOPIC
BACKGROUND
APPLICATION FOR
APPROACHING GIANT
HIATUS HERNIA
AFTER ENDOSCOPIC
MANAGEMENT OF
STOMACH VOLVO:
CASE REPORT**

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Abstract: According to Allison's classification, hiatal hernia can be divided into four degrees regarding its prolapse, as follows: I or sliding, II or rolling or paraesophageal and type III or mixed. But a fourth type is elucidated in the literature as type IV, known as "giant" or "intrathoracic stomach". **Clinical case:** A 49-year-old female patient reports postprandial fullness and weight loss. With a recent approach to the endoscopic management of stomach volvulus, a massive hiatus hernia was identified, in addition to Los Angeles grade D esophagitis. Planning: after performing esophageal manometry and phmetry (no changes), the patient was offered a questionnaire about the dyspeptic episodes she had, in order to quantify the loss in quality of life and serve as a parameter in the postoperative period for remission (or control) of the symptoms. Surgical technique: During videolaparoscopy, it was possible to identify that the hiatal hernia was, in fact, giant, comprising the stomach, omentum and transverse colon located in the thoracic cavity. After judicious dissection of the hernial sac and individualization of the structures, it was possible to reduce the abdominal content to its position. A 360° valve was then performed with the bottom of the stomach, followed by narrowing of the diaphragmatic hiatus with interrupted stitches, without tension when passing the orogastric tube. Postoperative: uneventful, with significant improvement of symptoms.

INTRODUCTION

Gastric volvulus occurs in two forms: organoaxial (where the stomach rotates on a vertical axis) and the less common mesenterioaxial (where the axis of rotation is horizontal). In the intrathoracic form, the stomach rotation is located in the thorax due to the concomitance of a hiatal defect. This is usually associated with organoaxial volvulus,

which accounts for most cases of intrathoracic gastric volvulus. Simple volvulus reduction and gastropexy, as once recommended, is no longer recommended. Fundoplication is mandatory, as in addition to improving the symptoms of patients who already have the diagnosis of Gastroesophageal Reflux Disease (GERD), it prevents its installation in patients who may develop it as a result of the extensive dissection performed in the hiatus to reduce the hernia.

PRESENTATION OF THE CLINICAL CASE

A 49-year-old female patient reports postprandial fullness and weight loss. With a recent approach to the endoscopic management of stomach volvulus, a large hiatus hernia was identified, in addition to Los Angeles grade D esophagitis.

After performing esophageal manometry and phmetry (with no changes), the patient was offered a specific questionnaire for GERD about the dyspeptic episodes she had, in order to quantify the loss in quality of life and serve as a parameter in the postoperative period for remission (or control).) of the symptoms. The patient answered affirmatively to only one question: "Do you experience breathing difficulties or episodes of choking?" (marked intensity 2 on a scale of 0 to 5). After the questionnaire, and given the recent event of stomach volvulus, videolaparoscopic Nissen fundoplication was indicated, with adequate dissection of the hernia sac, reduction of the abdominal content and loose manipulation of the gastric fundus and creation of the valve at 360°, followed by diaphragmatic narrowing:

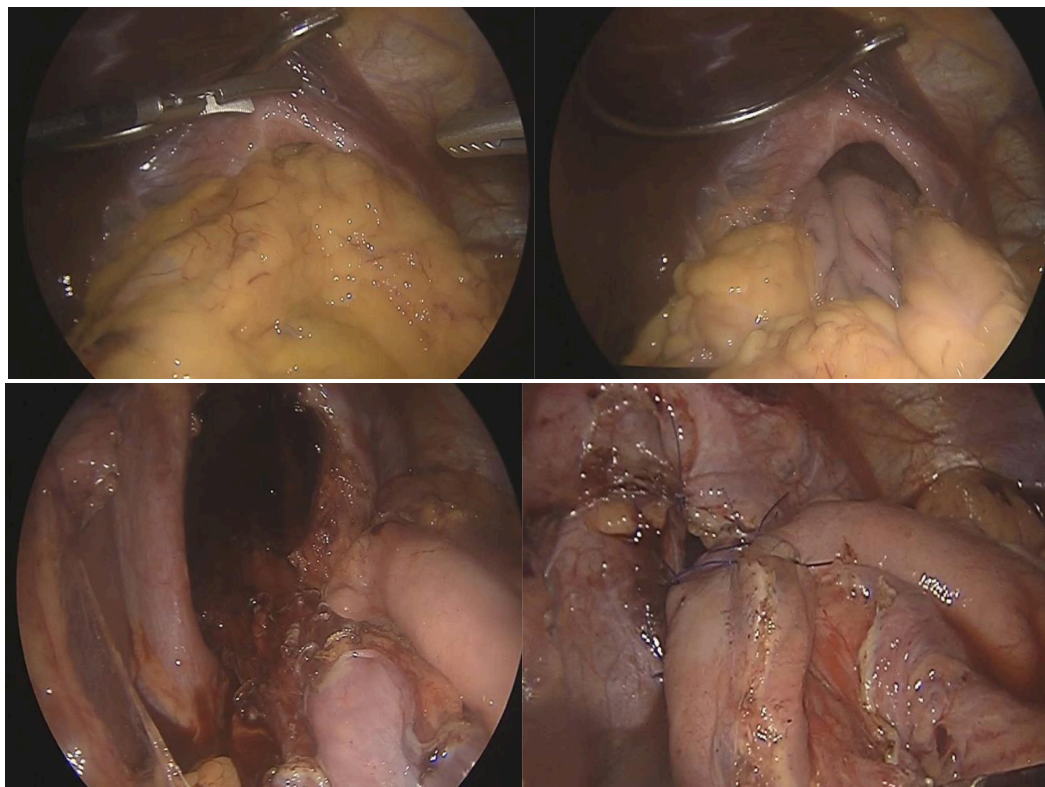


Figure 1: Fundoplication steps: identification of the hernial sac, dissection, reduction of the content, creation of the 360° valve with adequate laxity of the gastric fundus + narrowing of the diaphragmatic hiatus with interrupted stitches, without tension when passing the orogastric tube. The patient was discharged uneventfully and with improvement of symptoms.

DISCUSSION

Hiatus hernia is a common pathology in the population, having received various proposals for valves throughout the history of surgery. The “Floppy Nissen” concept emerged recently in the era of laparoscopic surgery, with its short “valve” with three sutures. The original description of the conventional “loose” Nissen fundoplication was that of an open procedure involving a large esophageal caliper, with complete fundal mobilization, ligation of the short gastric vessels, and placement of a finger or dilator under the complete fundoplication to ensure laxity. A maneuver equivalent to the last step during laparoscopic Nissen fundoplication has not been described. The consensus in the literature seems to be that the element of a fundoplication that defines it

as loose is, in fact, the complete mobilization of the fundus.

The incidence of permanent dysphagia is low and the numerous articles in the literature have demonstrated the current preference for performing this type of operation in the treatment of patients with GERD.

CONCLUSION

Minimally invasive surgical treatment of giant hiatal hernia is an extremely important resource in the management of this pathology. When it comes to the concurrence of this finding in a patient with an episode of stomach volvulus (fortunately resolved endoscopically), the benefit is even more evident, given the morbidity of the event at each repetition.

REFERENCES

Delta Madureira Filho, Fábio Athayde Veloso Madureira, Fernando Athayde Veloso Madureira, Eponina Lemme: Resultados das cirurgias “floppy nissen rossetti” e “floppy nissen longa “ realizadas por videolaparoscopia em pacientes com esôfago de barrett: estudo preliminar. Artigos Originais • Rev. Col. Bras. Cir. 30 (6) • Dez 2003 • <https://doi.org/10.1590/S0100-69912003000600011>

Iannelli, A., Fabiani, P., Karimjee, B. *et al.* Laparoscopic Repair of Intrathoracic Mesenterioaxial Volvulus of the Stomach in an Adult: Report of a Case. *Surg Today* 33, 761–763 (2003). <https://doi.org/10.1007/s00595-003-2566-7>

Zaninotto G, Costantini M, Anselmino M, Boccu C, Molena, D, Rigotti P, et al. Oesophageal and cardia function in patients with paraesophageal hiatus hernia. *Br J Surg* 1997;84:1163–7.

Richard E Davis, Ziad T Awad, Charles J Filipi, Technical factors in the creation of a “floppy” Nissen fundoplication, *The American Journal of Surgery*, Volume 187, Issue 6, 2004, Pages 724-727, ISSN 0002-9610, <https://doi.org/10.1016/j.amjsurg.2003.10.014>.