

LETTER TO THE EDITOR

NISSEN FUNDOPLICATION FOR THE TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE IN PATIENTS WITH CHAGAS DISEASE WITHOUT ACHALASIA

São Paulo, November 14th, 2009

Dear Sir:

Chagas disease (CD) is very prevalent in South America, with well-known manifestations in the digestive system. CD esophagopathy leads to a clinical and manometric picture similar to idiopathic (primary) achalasia⁴. Although the treatment for CD esophagopathy is well established³, South American surgeons and gastroenterologists are sometimes faced with CD patients without esophageal involvement but with gastroesophageal reflux disease (GERD) complaints. Surgical therapy in these patients may be debatable due to the fear of deterioration of esophageal peristalsis over time and consequent dysphagia.

The present aim is to evaluate, in a multicenter and retrospective study, the outcomes of Chagasic patients without achalasia submitted to laparoscopic Nissen fundoplication for the treatment of GERD.

Between 1999 and 2009, six patients with CD without Chagasic esophagopathy (achalasia) underwent Nissen (total) fundoplication at three different institutions, all highly experienced in the treatment of CD. There were five females, mean age 61 (range 57-64) years.

CD was diagnosed based on positive serologic test for CD and/or typical manifestations of CD in other target organs (heart or colon). Primary clinical findings were heartburn in five patients (83%), cough in one (17%) and had mild dysphagia in one (17%).

This study included the analysis of existing data with no subject intervention. No identifiers were used or sent to the coordinating center. Institutional review board submission was waived. Preoperative workup is summarized in Table 1.

All patients had been treated medically for GERD for at least six months prior to the operation and underwent a short-floppy laparoscopic Nissen fundoplication plus hiatoplasty. Short gastric vessels were divided in three patients (50%) and one (17%) had a hiatal mesh repair.

Patients were followed-up for a mean period of 57 (range 8-89) months. Postoperative complaints were dysphagia in one (17%) and bloating in one (17%).

The patient with postoperative dysphagia did not present dysphagia preoperatively but had complaint of dysphagia for solid foods after the operation. Repeated upper digestive endoscopy and esophagram were normal. Postoperative esophageal manometry disclosed an LES basal pressure of 13 mmHg with normal relaxation and normal peristalsis of the esophageal body. The patients were treated conservatively. Tests

Table 1
Preoperative workup

Test	Number of patients	Results
Upper digestive endoscopy	6 (100%)	Barrett´s esophagus - 1 (17%) Hiatal hernia - 2 (33%)
Esophageal manometry	6 (100%)	LES mean pressure 8 (range 3-15) mmHg LES relaxation normal in all cases Mean esophageal body distal pressure at 3 cm above the LES 62 (range 35-93) mmHg. 1 (17%) patient had 30% of non-peristaltic (simultaneous) waves, all other had normal peristalsis.
Barium esophagram	4 (67%)	hiatal hernia - 3 (50%) gastroesophageal reflux - 2 (33%) Esophageal dilatation was not observed.

LES - lower esophageal sphincter.

were not repeated in the postoperative period in the other patients due to the lack of symptoms.

Chagas disease is a systemic disease. Megacolon, heart disease and achalasia are the most common manifestations of the disease^{4,10}; however, megastomach⁹, enteropathy⁶, gallstones⁹, and cardiovascular autonomic function¹¹ have all been associated to CD. The real incidence of the association of GERD and CD is unknown but it seems to be unexplainably low. GERD is rarely described in untreated patients and we were able to find only six patients operated on in a multicenter study encompassing four centers with a large volume of patients with CD.

Esophageal symptoms, motility disorders, and dilatation of the esophagus are present in nearly 10% of patients with CD⁸. Moreover, studies in patients with CD without esophageal complaints show that over 20% of the patients show some sort of manometric abnormality¹. These findings make the wisdom of performing a total fundoplication in patients with GERD and CD questionable.

Manometric findings of Chagasic achalasia are similar to the ones of idiopathic achalasia: aperistalsis and non-relaxing lower esophageal

sphincter⁴. Different from idiopathic achalasia, CD patients may present initially with a non-specific undetermined manometric picture with findings such as: simultaneous contractions, low amplitude contractions and failed lower esophageal sphincter relaxation¹. Furthermore, some studies provided evidence of progression of peristaltic waves to aperistaltic in sequential manometries⁶. These patients in the undetermined phase of the disease may constitute an experimental model for the hypothesis that esophageal motility disorders progress from one type to another⁵. Our study was motivated by the fear of performing a total (Nissen) fundoplication in patients with CD due to the chance of progression to an esophageal dysmotility or even achalasia.

Our results show that Nissen fundoplication in patients with CD without Chagasic achalasia has excellent results in the majority of patients with an acceptable rate of dysphagia. The case of postoperative dysphagia probably has a different cause for the symptom, since manometry was normal. It must be emphasized that an adequate work-up is necessary in these patients. Esophageal function tests are mandatory, since patients with CD and dysphagia may not have esophageal aperistalsis^{2,6} and patients without dysphagia may have manometric disorders¹. Furthermore, symptoms are unreliable as dysphagia may be a symptom of GERD and heartburn a symptom of achalasia. Obviously, this study has some limitations: (a) it is a very small retrospective series; (b) manometry and other tests were not repeated in the postoperative period since patients

were asymptomatic, (c) tests were performed in different centers with different methods; and (d) the time of follow-up may be short.

We conclude that Nissen fundoplication is a safe method for the treatment of GERD in patients with CD without Chagasic achalasia.

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