

NON SURGICAL DISEASE AS A MOTIVE FOR DIFFICULT OPERATIVE APPROACH IN LAPAROSCOPIC SURGERY

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ABSTRACT

Laparoscopic antireflux surgery is the gold standard procedure for treatment of patients with reflux esophagitis. The purpose of this study is to report personal experience by a rare case from our practice with many concomitant diseases in laparoscopic antireflux surgery, analyzing the clinical and functional outcomes of this procedure and review of the literature. We report a woman with a long standing anamnesis for hiatal hernia, with impossibility for laparoscopic approach because of multiple concomitant diseases as Schoerman syndrome – deforming spondylarthrosis, progressing astenodynamy, attaining to impossibility to move, chronic kidney insufficiency, heart insufficiency, chronic anemia. The laparoscopic approach was found as flexible and adaptive enough to the different anatomical variations. Smooth early and late postoperative period, under protection of substitutional therapy.

Keywords: Laparoscopic fundoplication, difficult approach, Schoerman syndrome

Laparoscopic antireflux surgery is the gold standard procedure for treatment of patients with reflux esophagitis. Laparoscopic fundoplication (LF) is changing the way chronic heartburn is managed around the world. Data from New York State and elsewhere have demonstrated a three to fivefold increase in the number of funduplications performed for gastroesophageal reflux disorder (GERD) over the last decade.(1). The CDC estimates that 12,000 such procedures were performed in the United States in 1987 and 48,000 in 1998.(2,3).

The purpose of this study is to report personal experience by a rare case from our practice with many concomitant diseases in laparoscopic antireflux surgery, analyzing the clinical and functional outcomes of this procedure and review of the literature.

Hiatal hernias are usually classified into four distinct types: type I, sliding hernia; type II, paraesophageal hernia; and type III, a combination of type I and II hernias and type IV brachiesophagus (14). This type is based on the classic classification of Akerlund (13) Presentation of type I hernia is so-called reflux symptoms, in contrast with the symptoms associated with mechanical obstruction of the herniated stomach in type II and III hernias. Surgical indications for type I hernia depend upon the severity of esophagitis. In type II and III hernias, severe symptoms and complications represent the chief indications for repair. Totally intrathoracic stomach hernias generally present such a risk

of volvulus, strangulation and perforation that surgery is indicated even in asymptomatic and uncomplicated cases.(12).

The main indication for surgery in patients with GERD is the failure of long-term medical therapy. All patients have to had severe acid reflux, proved by 24h-pH monitoring, endoscopic evidence of esophagitis, and insufficient function of the lower esophageal sphincter. (7-9).

Failure of open fundoplication occurs in 9% to 30% of patients, depending on how failure is defined and how long until follow-up.(4-6). Published failure rates of laparoscopic Nissen fundoplication are 2% to 17%, (7-11) depending on the definition of failure and the experience of the surgeons. The lower rate published for laparoscopic surgery may reflect the shorter follow-up possible for this new procedure. When there is impossibility for continuing the laparoscopic procedure, the surgeon has to consider a conversion.

The most common reason for conversion is the intraoperative hemorrhage in patients with defect of the diaphragm's hiatus. There is consensus on certain individual risk factors and their additive effect on the likelihood of conversion. Statistically significant risk factors for conversion also are increasing age, a history of previous upper abdominal surgery, severe concomitant cardio and pulmonic diseases. The combination of patient- and disease-related risk factors increases the conversion risk. In the training of residents, the number of cases needed for reaching proficiency exceeds 200 cases. Conversion exerts adverse effects on operating time, postoperative morbidity, and hospital costs, especially when it is enforced. There appears to

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be no absolute contraindication to LF that is agreed upon by all. Predictive systems based on these factors appear to be useful in selection of cases for resident training. (1-9). The Nissen, Nissen-Rossetti, or Toupet techniques are the more frequently used. (5-9).

The indications for surgery procedure were limited to the GERD after failure of the conservative therapy, complicated cases among patients with long standing history of disease, or presence of morphological changes in esophagus (Barett's esophagus, peptic ulcer).

In our clinic, the method of choice is the laparoscopic fundoplication by Nissen-Rossety. Our technique includes elimination and resection of hernial saccus, if such is presented, fixation of lower esophageal sphincter in to abdominal cavity, which aids its normal function under the positive intraabdominal pressure. We make a crurotomy on the legs of the diaphragm and simultaneously fix the esophagus on as the suture is put on the rear side of the organ. Thus, we attain the arrest of fundoplicate in abdominal cavity, to insure adequate length of the esophagus, restoring the sphincter pressure and the opportunity for relaxing the sphincter after swallowing.

Between 25.06.2001 – 17.07.2006 (5 years) 39 patients were operated in the clinic. From these 21 were with open surgery and 18 with laparoscopic operation. There were 9 men, 30 women, between 24-84 years of age. The diagnosis and the indications for surgery were established with Barium enema of the esophagus and the stomach, endoscopy, and 24-pH monitoring. We advanced to conversion in 3 of the cases, as we met acute intraoperative hemoraghe. We performed a follow - up after 1 and 6 months, and on the 1 and 3 year to some of them.

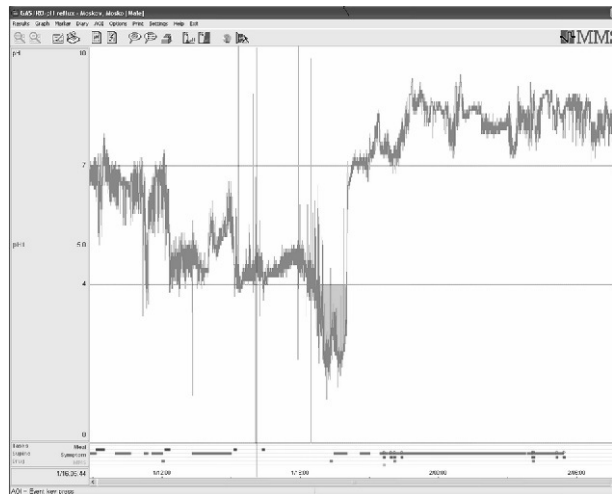


Fig 1.

We report a woman with a long standing anamnesis for reflux symptoms and heartburn, with impossibility for normal feeding, uninfluenced by the conservative therapy. The laparoscopic approach wasn't seemed to be the best solution because of multiple concomitant diseases as Schoerman syndrome – deforming spondylarthrosis, progressing astenoadynamy, attaining to impossibility to move. Lap-

aroscopic surgery was indicated because of chronic kidney insufficiency, heart insufficiency, and chronic anemia. The data from laboratory investigation are as follows:

Hb	Hct	Leu	Tr	Protein	Creatinin	Urea	Glucose
102	0.33	11.4	165	68.4	84.7	159	5.24

The hernial diagnosis was covered by 24-pH monitoring (Fig. 1), Barium enema of the esophagus and the stomach, (Figs. 3 and 4) endoscopic investigation of the oesophagus, stomach and duodenum with biopsy.

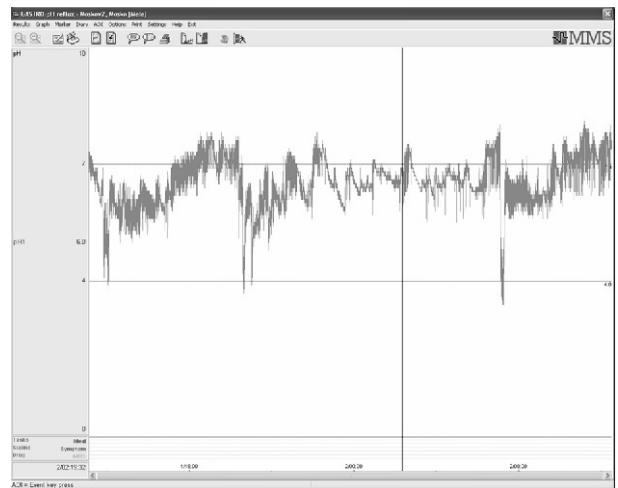


Fig 2.



Fig 3.

After consults with anaesthesiologist and pulmologist, made about distorted thorax, we decide to try laparoscopic

approach of Nissen - Rossety mode. We face many difficulties encountered in anaesthesia - difficult intubation, and operative manipulations as introducing the trocar ports and internal movements of the instruments due to altered body habitus in terms of the patient positioning and surgical access. The access to hernial saccus was additionally hampered by anatomical changes of the patient's habitus - the angle of scoliosis was more then 35 degrees. Despite of

that, we found an axial hiatal hernia, which was removed from mediastinal space (Fig. 5). We closed the hiatal defect by cruroraphy, to size that allows passing of esophageo-gastral catheter (56 frenches) (Fig. 6). We fundoplicated the stomach in the mode of Nissen - Rossety (Fig. 6 and 7). Drainage was put in the field of manipulations.

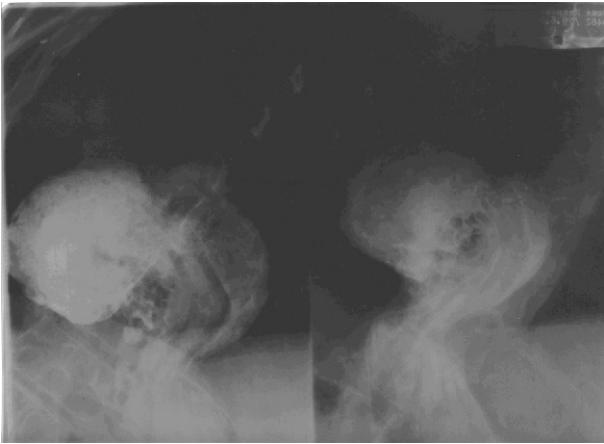


Fig 4.



Fig. 7.

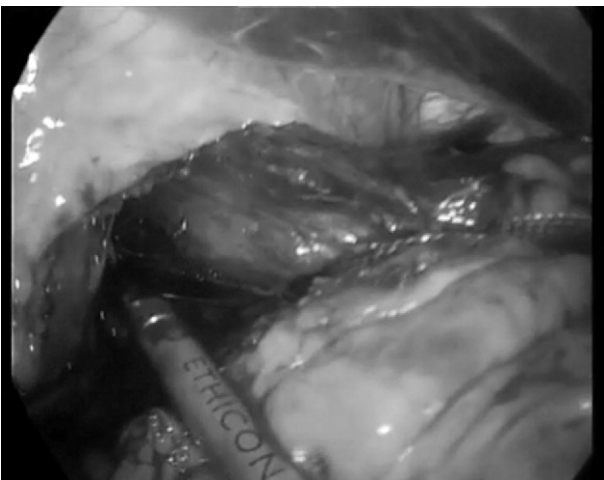


Fig 5.

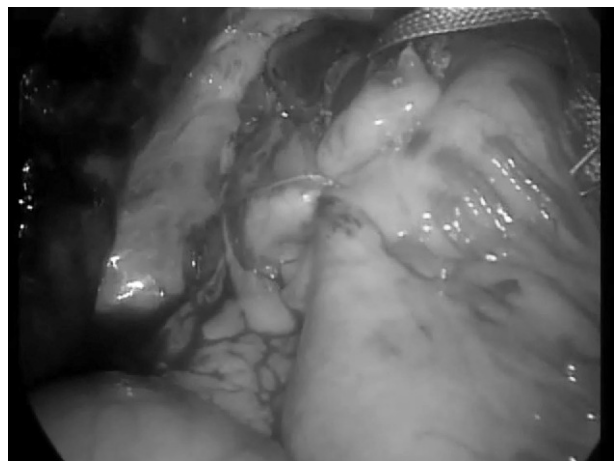


Fig 8.

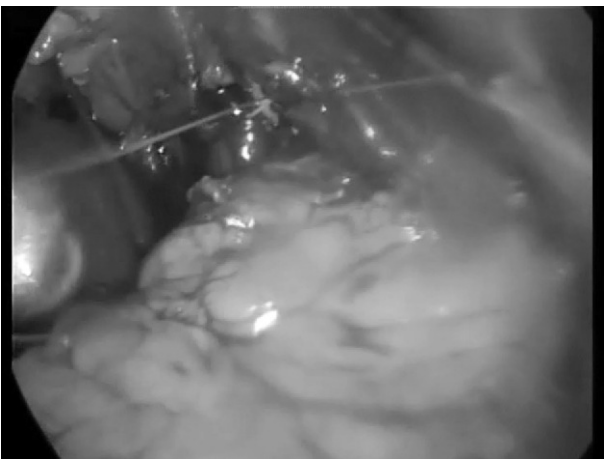


Fig 6.

The laparoscopic approach was found as flexible and adaptive enough to the different anatomical variations. Smooth early and late postoperative period, under protection of substitutional therapy.

Symptomatic recurrence of reflux was not observed during the period of follow-up (6 months). (Fig. 2)

Conclusion: Despite the difficulties in technical aspects in such cases, the LF can be applied in patients with severe systematic diseases, if is indicated.

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