

Long-term (15-year) objective evaluation of 150 patients after laparoscopic Nissen fundoplication

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Introduction: Laparoscopic Nissen fundoplication is the preferred operative treatment for patients with gastroesophageal reflux disease. The most recent published results only refer to clinical evaluations and few discuss objective measurements. Our purpose was to determine the late results of laparoscopic Nissen fundoplication, performing clinical, endoscopic, histologic, and functional studies. **Material and methods:** A total of 179 patients were included in a prospective study. All had gastroesophageal reflux disease symptoms of at least 5-year duration, daily dependence on proton pump inhibitors, and a type I hiatal hernia less than 5 cm. Exclusion criteria included Barrett's esophagus, hiatal hernia >5 cm, failed antireflux surgery, and obesity (body mass index >30). We performed a radiologic study, 3 or more endoscopic procedures with biopsy samples of the antrum and esophagogastric junction, esophageal manometry, and 24-hour pH monitoring. **Results:** We found that 4 patients (2.2%) died 3-4 years after operation from nonoperative reasons. A total of 25 patients (14%) were lost to follow-up, and 150 patients (83.8%) submitted to late objective evaluations (15 years). Visick I-II symptoms were observed in 79.3% and III-IV (failures) in 20.7%. Endoscopy showed a normal positioning of the esophagogastric junction in the Visick I-II patients and a type III cardia or hiatal hernia with erosive esophagitis in Visick III-IV patients. Short-segment Barrett's esophagus developed in 5.3% of patients. Lower esophageal sphincter pressure remained increased over the preoperative value in all groups. The 24-hour pH monitoring also was decreased over the preoperative value in Visick I-II patients but showed no significant change in Visick III-IV patients. Carditis at the esophagogastric junction regressed to fundic mucosa in 50% of Visick I-II

patients. Conclusion: Laparoscopic Nissen fundoplication produces control of symptoms in 80% of patients late (up to 15 years) after surgeries corroborated by endoscopic, histologic examinations, and functional studies. It is essential to perform these objective evaluations to demonstrate the ?antireflux effect? after laparoscopic Nissen fundoplication.