



Mesh-reinforced hiatal hernia repair

We read with interest the recent article on laparoscopic repair on paraesophageal hiatal hernia by Ferri et al. [5]. The authors reported a recurrence rate of 23% in a series of 35 laparoscopic patients with short-term follow-up evaluation, 85% of whom reported improved satisfaction with their state of health. The authors performed all their hernia repairs using simple cruroplasty without mesh.

The authors commented that there is room for improvement in the results from minimally invasive paraesophageal hernia repair. We agree. Simple cruroplasty of a large hiatal hernia typically results in a high rate of recurrence.

We point out, however, that the results from minimally invasive paraesophageal herniorrhaphy with mesh reinforcement actually are quite good. In a randomized study we published in 2002 [6], our recurrence rate for patients with a large hiatal defect who had mesh reinforcement of their minimally invasive cruroplasty was zero. Other authors also have published salutary results with the use of mesh at the esophageal hiatus [1, 3, 7–9]. In addition, a relatively large series describing the beneficial effects of mesh-reinforced open hiatal hernia repair was published in 1998 [2].

Some authors are concerned that placement of mesh at the hiatus will invite complications such as erosion. We did experience that once with the use of polypropylene [2], but we have not seen or read of any case in the English literature of polytetrafluoroethylene (our prosthetic of choice) eroding into the esophagus after a hiatoplasty. There has been one case report (in Italian, from Torino) describing a polytetrafluoroethylene erosion into the cardia [4].

We support the notion that mesh reinforcement of simple cruroplasty for large-defect hiatal hernia results in a lower recurrence rate than cruroplasty without reinforcement.

References

1. Basso N, De Leo A, Genco A, Rosato P, Rea S, Spaziani E, Primavera A (2000) 360 degrees laparoscopic fundoplica-

- tion with tension-free hiatoplasty in the treatment of symptomatic gastroesophageal reflux disease. *Surg Endosc* 14: 164–169
2. Carlson MA, Condon RE, Ludwig KA, Schulte WJ (1998) Management of intrathoracic stomach with polypropylene mesh prosthesis-reinforced transabdominal hiatus hernia repair. *J Am Coll Surg* 187: 227–230
3. Champion JK, Rock D (2003) Laparoscopic mesh cruroplasty for large paraesophageal hernias. *Surg Endosc* 17: 551–553
4. Coluccio G, Ponzio S, Ambu V, Tramontano R, Cuomo G (2000) Dislocation into the cardiac lumen of a PTFE prosthesis used in the treatment of voluminous hiatal sliding hernia: a case report. *Minerva Chir* 55: 341–345
5. Ferri LE, Feldman LS, Stanbridge D, Mayrand S, Stein L, Fried GM (2005) Should laparoscopic paraesophageal hernia repair be abandoned in favor of the open approach? *Surg Endosc* 19: 4–8
6. Frantzides CT, Madan AK, Carlson MA, Stavropoulos GP (2002) A prospective, randomized trial of laparoscopic polytetrafluoroethylene (PTFE) patch repair vs simple cruroplasty for large hiatal hernia. *Arch Surg* 137: 649–652
7. Granderath FA, Kamolz T, Schweiger UM, Pointner R (2003) Laparoscopic refundoplication with prosthetic hiatal closure for recurrent hiatal hernia after primary failed antireflux surgery. *Arch Surg* 138: 902–907
8. Granderath FA, Schweiger UM, Kamolz T, Pasiut M, Haas CF, Pointner R (2002) Laparoscopic antireflux surgery with routine mesh-hiatoplasty in the treatment of gastroesophageal reflux disease. *J Gastrointest Surg* 6: 347–353
9. Keidar A, Szold A (2003) Laparoscopic repair of paraesophageal hernia with selective use of mesh. *Surg Laparosc Endosc Percutan Tech* 13: 149–154

M. A. Carlson

Department of Surgery
University of Nebraska Medical Center and the VA Medical Center
4101 Woolworth Avenue
Omaha, NE 68105, USA

C. T. Frantzides

Department of Surgery
Evanston Northwestern Healthcare and Northwestern University
Chicago, IL, USA

Online publication: 26 September 2005