

Letter to the Editor

Partial transmural gastroesophageal migration of polypropylene mesh after surgery for a recurrent hiatal hernia

Dear Editor,

We commend Porziella et al¹ on their report surrounding transmural gastric migration of PTFE mesh after prosthetic antireflux surgery. As of 2015, only 8 cases have been described in the dedicated literature. Migration of polypropylene mesh is even rare, as we know of only 2 descriptions. Herein we witness the third evidence of this extremely uncommon but serious disease.

A 39-year-old woman presented with long-standing dysphagia. Twenty years before, she underwent laparotomic Nissen fundoplication and cruroplasty with a polypropylene mesh for gastroesophageal reflux disease (GERD) associated with a large hiatal hernia (LHH). At admission, gastroscopy and CT scan documented a partial transmural migration of the mesh resulting anchored to the gastric wall (Figure 1A-B). The mesh was removed through a laparotomy gastrotomy followed by simple Toupet fundoplication without crural closure. Ten months after the intervention, she keeps on being asymptomatic.

Associating prosthetic cruroplasty with fundoplication has become the standard procedure for GERD with LHH: in fact, the use of mesh repair is associated with fewer recurrences than simple closure². However, this intervention is not exempt from complications (less than 2%) such as fibrosis and stenosis of the hiatus³. Transmural migration of the mesh through the gastric or the esophageal wall is another specific but infrequent problem. As of 2015, only 2 and 8 cases have been described respectively for polypropylene and PTFE dual meshes^{1,4-6}. The time span elapsed from the intervention to migration varies from a month to several years, and it is irrespective of the prosthetic material⁴⁻⁶. Of interest, a complete migration of the employed mesh is more auspicious than a partial one: in the former event, the mesh can be retrieved by gastroscopy or even naturally expelled, while in the latter surgery becomes imperative^{1,6}. The introduction of bioabsorbable materials could markedly reduce the occurrence of this kind of complication⁶.

Conflict of Interest

The Authors declare that they have no conflict of interests.

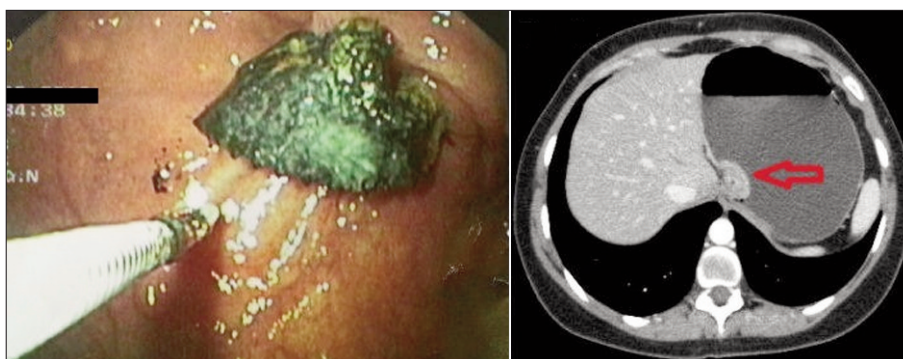


Figure 1. **A**, Gastroscopy showed partial migration of the polypropylene mesh into the wall of gastric fundus. **B**, Abdominal CT scan documented a hyperdense foreign body eroding the gastric wall (red arrow).

References

- 1) PORZIELLA V, CESARIO A, LOCOCO F, MARGARITORA S, LEUZZI G, MARCHESE M, PETRUZZIELLO L, COSTAMAGNA G, GRANONE P. Complete transmural gastric migration of PTFE mesh after surgery for a recurrent hiatal hernia. *Eur Rev Med Pharmacol Sci* 2012; 16: 42-43.
- 2) PRIEGO P, RUIZ-TOVAR J, PÉREZ DE OTEYZA J. Long-term results of giant hiatal hernia mesh repair and antireflux laparoscopic surgery for gastroesophageal reflux disease. *J Laparoendosc Adv Surg Tech A* 2012; 22: 139-141.
- 3) CHILINTSEVA N, BRIGAND C, MEYER C, ROHR S. Laparoscopic prosthetic hiatal reinforcement for large hiatal hernia repair. *J Visc Surg* 2012; 149: e215-220.
- 4) GAJBHIYE R, QURAIISHI AH, MAHAJAN P, WARHADPANDE M. Dysphagia due to transmural migration of polypropylene mesh into esophagus. *Indian J Gastroenterol* 2005; 24: 226.
- 5) CARLSON MA, CONDOR RE, LUDWIG KA, SCHULTE WJ. Management of intrathoracic stomach with polypropylene mesh prosthesis reinforced transabdominal hiatus hernia repair. *J Am Coll Surg* 1998; 187: 227-230.
- 6) STADLHUBER RJ, SHERIF AE, MITTAL SK, FITZGIBBONS RJ JR, BRUNT ML, HUNTER JG, DEMEESTER TR, SWANSTROM LL, SMITH DC, FILIPI CJ. Mesh complications after prosthetic reinforcement of hiatal closure: a 28-case series. *Surg Endosc* 2009; 23: 1219-1226.

E. Virgilio, P. Mercantini, M. Cavallini

Medical and Surgical Sciences and Translational Medicine, Faculty of Medicine and Psychology "Sapienza", St. Andrea Hospital, Rome, Italy