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Mesh Migration Following Laparoscopic Hiatal Hernia Surgery with Mesh

Laparoskopik Meshli Hiatal Herni Operasyonu Sonrası Mesh Migrasyonu

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Özet

Hiatal herni nedeniyle 6 yıl önce prolen mesh kullanılarak laparoskopik hiatal herni operasyonu olmuş 74 yaşında bayan hastaya medikal tedaviye dirençli dispepsi nedeniyle yapılan özofagogastroduodenoskopide gastroözofageal bileşkede saptanan mide lümeni içine migrete olmuş mesh olgusunu sunduk. Literatür eşliğinde çok nadir görülen bu komplikasyonu ve bu komplikasyonu engellemek için alınabilecek önlemleri tartışmayı amaçladık.

Anahtar Kelimeler: hiatal herni, meshli onarım, mesh migrasyon

Abstract

We presented a patient with migrated mesh inside the gastric lumen detected at gastroesophageal junction during esophagogastroduodenoscopy performed because of dyspepsia which was resistant to medical treatment in a 74-year-old patient who had laparoscopic hiatal hernia surgery through proline mesh due to hiatal hernia 6 years ago. The aim of this case report was to discuss this rare complication and precautions to be taken for prevention under the light of literature research.

Key words: Hiatal hernia, mesh repair, mesh migration

Introduction

Hiatal hernia is a common disease characterized by the displacement of the abdominal structure or structures from the hiatus of the diaphragm into the chest cavity. Type 1 hernia repair is not necessary in patients without gastroesophageal reflux disease. A repair is usually indicated in symptomatic patients in patients with Type 2, 3 and 4 hiatal hernia (1).

Mesh placement is optional and controversial in anti-reflux surgery. Mesh-related complications were reported in approximately 20% of these patients; however, mesh migration is very rare (0.07%) (3). Although the cause for erosion and migration are not clear, it may be associated with chronic foreign body reaction and peristaltism (2).

The Case

A 74-year-old female patient presented with a long-standing complaint of epigastric pain which increased with breathing and persisted despite the use of proton pump inhibitors and antacids. The patient had a history of reflux and laparoscopic hiatal hernia repair with mesh placement 6 years ago. She had tenderness on the epigastric region in the physical exam. There was not any abnormal parameter in the laboratory evaluation. Esophagogastroduodenoscopy (OGD) was decided because of persistent dyspeptic complaints which were resistant to medical treatment. A foreign body of which the root was embedded into the mucosa and projected into the stomach was detected in the posterior wall of the esophagogastric junction (Fig.1), and snare excision was performed. When it was detected that the lesion taken out of the lumen through a net was a mesh, excision was done with forceps (Figure 2). Biopsies were collected from edematous, heterogenous tissue surrounding the mesh root. The computed tomography done for control revealed that the gastric wall integrity was preserved; there was not any perforation and no foreign body was left.

Figure 1: Esophageal rectoflexioma image

Figure 2: The mesh removed through a net

Discussion

The main disadvantage of using mesh in hiatal hernias is the risk of local complications (fibrosis and adhesions, erosion, migration or perforation). There is not any report of long-term outcomes (>10 years) on the incidence of mesh-related complications (11, 12).

A study conducted on 159 patients reported that mesh supplementation did not significantly reduce the incidence of recurrent hiatal hernia; however, it increased the rate of solid dysphagia at three years when compared to suture repair alone (2).

Stadlhuber et al. reported 28 postoperative complications after mesh repair for esophageal hiatal hernia. According to their report, the most common major complaint was dysphagia followed by heartburn, chest pain, epigastric pain, and weight loss with a decreasing prevalence rate. Among the patients who were re-operated, intraesophageal mesh exposure was detected 17 patients, esophageal stricture was detected in 6 patients, and significant fibrosis was detected in 5 patients. No correlation was observed between the development of complications and the type or shape of the mesh used for repair (3).

In the studies reviewed, adhesions, mesh migration, and esophageal stenosis due to fibrosis were the more common complications leading to reoperations for removal of the prosthesis for dysphagia. Furthermore, 2 patients with pseudoachalasia have been reported after hiatal hernia repair with mesh (4-8). Infectious complications due to mesh have been reported once in a case of periesophageal abscess without perforation (11). A fatal cardiac tamponade was reported as secondary to coronary venous laceration due to mesh fixation by tucker (11).

No significant association was found between complications and mesh type and configuration in many studies reviewed (9, 11).

J.Li et al. reported in their study that the most common mesh types were polytetrafluoroethylene and polypropylene. Endoscopic mesh removal (15.7%),

laparoscopic mesh removal (11.8%), surgical mesh removal (19.6%); distal esophageal resection and gastric resection were reported as 19.6% and 5.9%, respectively. Some patients should be fed by gastric tube. Since the mesh was completely migrated in our patient, it was taken out endoscopically.

Conclusion In patients who have been operated using mesh for hiatal hernia, mesh migration rarely occurs and causes serious complications. The benefit of mesh in anti-reflux surgery remains unclear. Limitation of mesh use would be beneficiary in order to avoid this complication.

Ethical issues: An informed consent was signed by the patient for this case report.

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