Mesh Erosion into Sigmoid Colon after Inguinal Hernia Repair

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To the Editor: Tension-free hernia repair with mesh is currently the most popular technique for herniorrhaphy. Although it is well tolerated with few complications, late-onset complications, such as mesh migration, erosion into associated structures, enterocutaneous fistula, and abscess formation, have been reported.[1] We herein report a case of a 67-year-old male with mesh erosion into the sigmoid colon after inguinal hernia repair.

A 67-year-old male, who underwent laparoscopic tension-free herniorrhaphy via transabdominal preperitoneal approach four years ago, was admitted because of a 2-month history of increasing severe lower abdominal pain. The pain was not related to diet, and the patient did not experience nausea, vomiting, hematochezia, diarrhea, or emaciation. Abdominal computed tomography scan revealed circumferential wall thickening of sigmoid colon adherent to the bladder presenting as a suspected colonic malignancy. A mesh plug was found involving the sigmoid colon by colonoscopic examination [Figure 1]. Laparoscopic sigmoid resection was performed with primary end-to-end reanastomosis using the 31 EEA stapling device (Reach Surgical, TianJin, China). Ten centimeters of the sigmoid colon containing the mesh was removed. The patient had an unremarkable postoperative course and was discharged on the 7th postoperative day.

Recurrence is the most common complication for inguinal hernia repair, even with mesh. Complications unique to mesh repair have been reported, such as inguinodynia. More serious complications include contraction, migration, and erosion into the adjacent organs. However, mesh migration is unusual and primarily erodes into the urinary bladder. Bowel complications are more infrequent and grievous. There are rare isolated reports of complications for migrated mesh eroding into the colon.

The exact etiology of the complication encountered in our patient remains unclear. During the initial surgery, the mesh should be sutured to the abdominal wall, and then the peritoneum can be reconstructed with a continuous suture to cover the mesh plug. When both of these sutures are insecure, the mesh would migrate into the peritoneal cavity and erode into the sigmoid colon. Al-Subaie *et al.*[2] presumed that the pressure necrosis resulting from the physical contact between the mesh and the colon lead to fistula formation and consequently to mesh migration into the colon.

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D'Amore *et al.*[3] found that 5 of 7 patients (2 involving cecum and 5 involving left colonic after plug repair) suffered from diverticular disease and thought that diverticular inflammation might induce the plug to erode into the colon.

What can we do to avoid this complication? Moorman and Price[4] believed that lack of fixation of mesh predisposes to its migration. D'Amore *et al.*[3] considered that other technical details, such as to avoid the excision of the sac, identify and repair any hole in the peritoneal sac, use pre-shaped devices, and choose the proper size and light material, could reduce the incidence of this complication. Regardless of the type of mesh repair (open or laparoscopic), meticulous care for correct placement and reliable suture is necessary to avoid complications. Suturing the mesh to the surrounding fascia is a critical step during the operation.

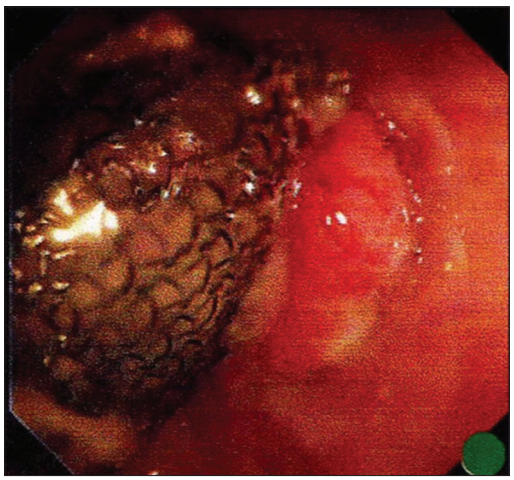

Figure 1: Colonoscopy showing a mesh in the sigmoid colon.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

References

1. Chen T, Zhang YH, Wang HL, Chen W, Wang J. Late-onset deep mesh infection: A study of eight cases detected from 2666 consecutive patients with abdominal wall hernia repairs. Chin Med J 2016;129:1870-2. doi: 10.4103/0366-6999.186651.
2. Al-Subaie S, Al-Haddad M, Al-Yaqout W, Al-Hajeri M, Claus C. A case of a colocutaneous fistula: A rare complication of mesh migration into the sigmoid colon after open tension-free hernia repair. Int J Surg Case Rep 2015;14:26-9. doi: 10.1016/j.ijscr.2015.06.039.
3. D'Amore L, Gossetti F, Manto O, Negro P. Mesh plug repair: Can we reduce the risk of plug erosion into the sigmoid colon? Hernia 2012;16:495-6. doi: 10.1007/s10029-012-0921-6.
4. Moorman ML, Price PD. Migrating mesh plug: Complication of a well-established hernia repair technique. Am Surg 2004;70:298-9.