

# An Unusual Delayed Complication of Urogynecologic Surgical Mesh: Perirectal Abscess 10 Years After Initial Placement Treated by Endoscopic Removal

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## ABSTRACT

Surgical mesh is commonly used for the management of pelvic organ prolapse and stress urinary incontinence with overall beneficial effects. However, the Food and Drug Administration has issued safety notifications about potentially serious complications associated with the use of synthetic mesh in pelvic organ prolapse procedures. In this report, we describe a perirectal abscess in a patient which developed 10 years after initial mesh placement. Percutaneous management of the abscess was not possible because of the deep pelvic location. The abscess was successfully managed endoscopically, including the removal of a large piece of mesh. Endoscopic management of pelvic abscesses, including an endoscopic ultrasound-guided approach, should be considered early.

## INTRODUCTION

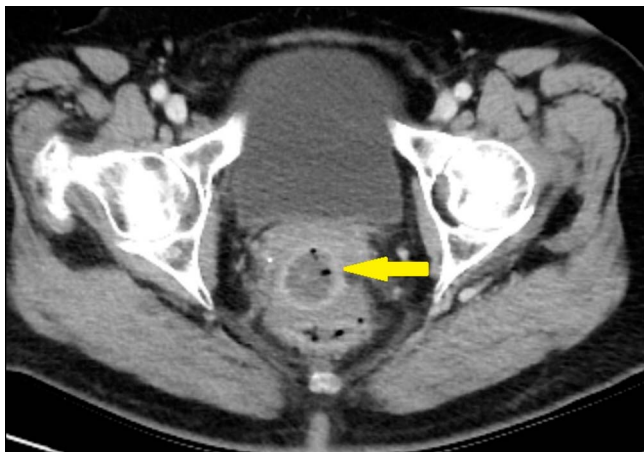
More than 500,000 surgical procedures are performed annually for the management of symptomatic pelvic organ prolapse (POP) and stress urinary incontinence (SUI). Surgical mesh has been used in these surgeries for more than 30 years. However, an increasing number of reports of adverse effects have been described, particularly with a transvaginal route of mesh insertion, which has led to the issuance of Food and Drug Administration guidelines regarding the use of mesh in urogynecological procedures. We describe a case of a patient who was found to have a perirectal fistula and abscess associated with surgical mesh that was successfully managed with endoscopic therapy.

## CASE REPORT

A 63-year-old diabetic woman with urinary incontinence underwent robotic-assisted laparoscopic sacro-colpopexy (Burch procedure) with polypropylene mesh placement in 2008. She did well until she began to have rectal bleeding 7 years later. Sigmoidoscopy showed protrusion of the mesh from the anterior wall of the rectum. During anoscopy under anesthesia, a 2-cm length of mesh was cut and removed. She did well for 18 months before experiencing worsening low back and groin pain. Computed tomography (CT) revealed a 3 × 3 × 8-cm fluid collection anterior to the rectum. Percutaneous drainage was attempted, but a suitable window could not be found for drain placement. Long-term antibiotics were given for several months, but she was readmitted for fevers. CT showed that the abscess now contained air (Figure 1). The patient was then referred for endoscopic ultrasound (EUS)-guided abscess drainage. Flexible endoscopy revealed purulent drainage through a pinpoint hole in the low rectum (Figure 2). A through-the-scope balloon dilator was used to enlarge the fistula to 12 mm (Figure 3). After endoscope entry into the cavity, a large piece of coiled surgical mesh was seen (Figure 4). The proximal margin was released using endoscopic scissors, and an 11-cm length of mesh was removed (Figure 5). Two 7-Fr x 5-cm double pigtail stents were placed in the cavity (Figure 6). A CT 3 weeks later showed near-complete resolution of the abscess and spontaneous extrusion of the stents (Figure 7). The patient has remained well without symptomatic recurrence of the abscess over 4 years of follow-up.

## DISCUSSION

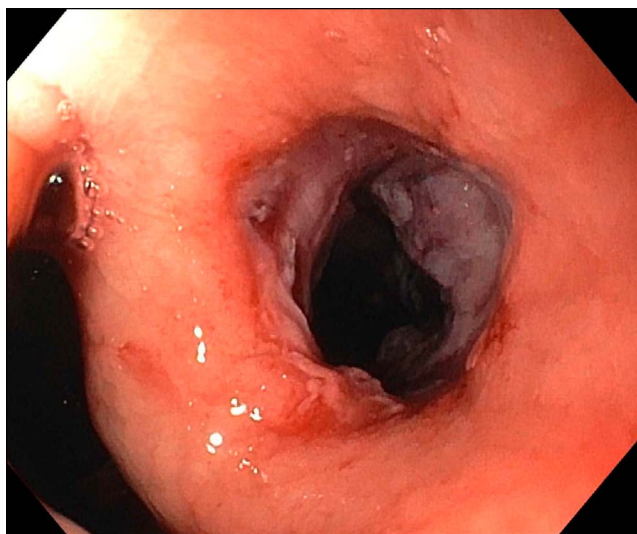
The use of surgical plastic mesh is common for the management of POP and SUI. Plastic mesh (usually polypropylene) has been in use for these indications since the 1990s. Randomized controlled trials have demonstrated the effectiveness of mesh surgery compared with conventional surgery for SUI and POP, with a lower need for immediate reoperation surgery,<sup>1</sup> but most of these studies did not give data on long-term complications. Most experts in the field agree that adequate postmarketing data are lacking.



**Figure 1.** Axial computed tomography image showing abscess with air bubbles (arrow) anterior to the rectum.

Adverse effects associated with mesh use include erosion or migration which can lead to pain, dyspareunia, urinary or defecation symptoms, as well as a variety of mesh-related infections, including abscess development.<sup>2</sup> Repeat surgery 1 year out from mesh implantation is necessary in 1%–6% of cases.<sup>3</sup> The need for repeat surgery seems to be related to the type of surgery that was previously performed, as well as the amount of mesh used during the procedure, which is higher in the vaginal mesh cases.<sup>4</sup>

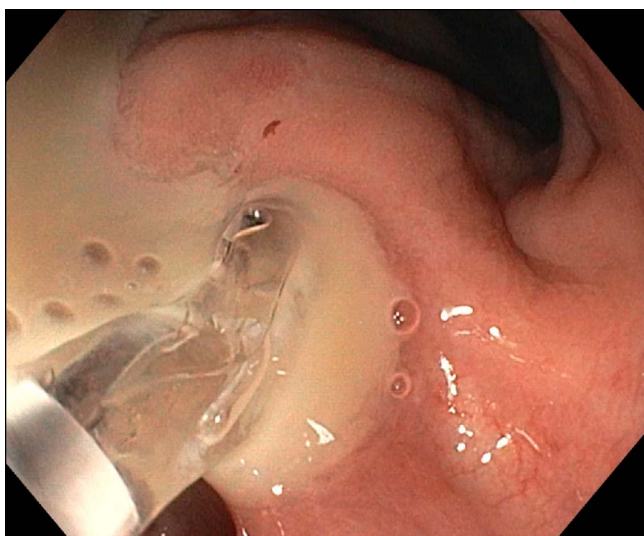
The Food and Drug Administration issued safety notifications in 2008 and 2011 to inform the public about the incidence of serious complications associated with the use of synthetic mesh in POP procedures.<sup>5</sup> These regulatory warnings led to increased awareness of potential problems by the public, physicians, and medical malpractice attorneys. This led to an “unprecedented media frenzy,”<sup>6</sup> and as a result, mesh use for POP and SUI has decreased in the United States and other countries.<sup>7</sup> Current guidelines suggest there is value to the use of mesh in selected



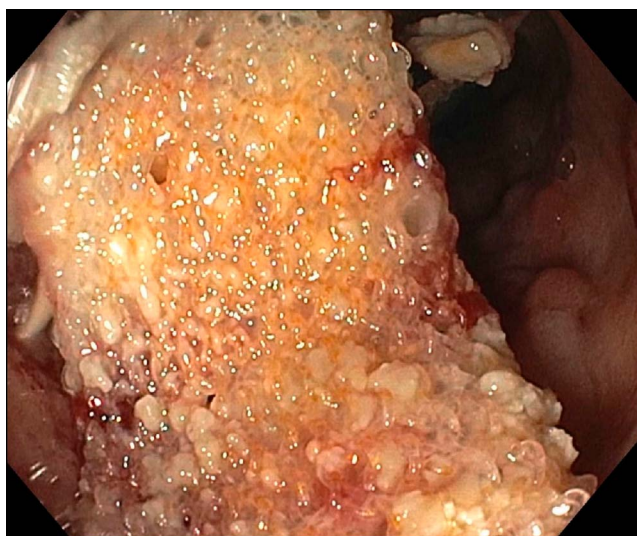
**Figure 3.** Appearance of fistula after dilating to 12 mm.

cases,<sup>8</sup> and improved mesh materials and improved surgical techniques could mean that the use of mesh for these indications will continue in the future.

The occurrence of a perirectal abscess associated with the use of pelvic mesh is uncommon. The case described here describes successful endoscopic management of an abscess and removal of the retained mesh. In this case, access to the abscess cavity was made easier because of the presence of a tiny fistulous connection that could be seen endoscopically. Dilatation of this fistula allowed endoscopic access to the abscess cavity, which revealed a large piece of retained mesh. Although most of the mesh was lying free in the cavity, 1 end was tightly adherent to the proximal end of the cavity. The use of endoscopic scissors allowed freeing up of the mesh, which could then be removed almost entirely intact.

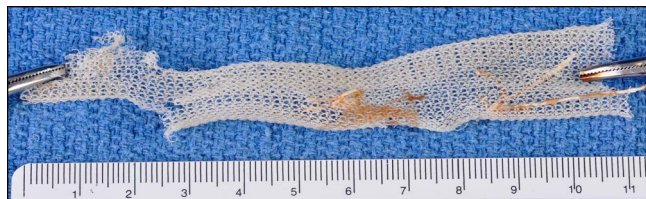


**Figure 2.** A dilating balloon has been inserted into the abscess through a rectal fistula; pus can be seen emanating from the fistula.

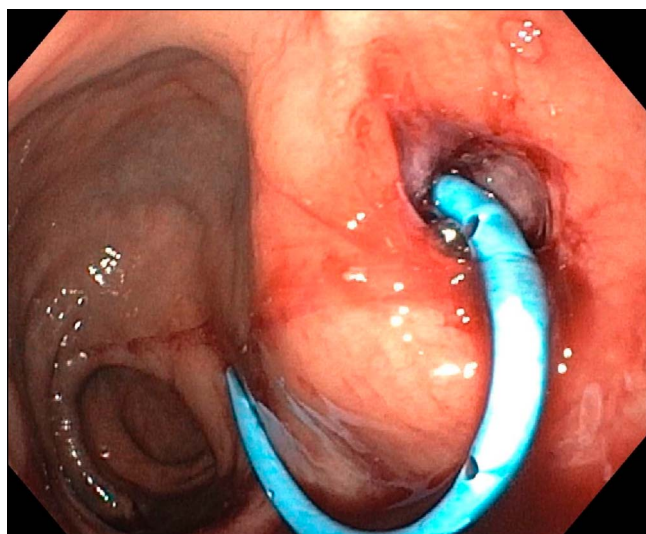


**Figure 4.** After entry of the endoscope into the abscess cavity, a large fragment of surgical mesh is visible.



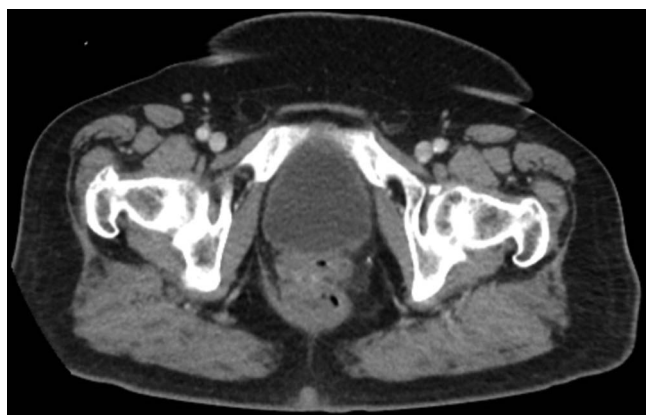


**Figure 5.** A 12-cm length of mesh was released from the cavity with the use of endoscopic scissors.



**Figure 6.** Appearance of fistula after placement of the first of 2 plastic double pigtail stents.

If, however, there were no fistulous connection that could be used to access the abscess, EUS guidance could be used to locate the abscess cavity and then guide placement of a lumen-apposing metal stent.<sup>9</sup> After placement of the lumen-apposing metal stent, a thinner endoscope could be used to explore the abscess cavity and remove the retained foreign body. EUS-guided drainage of pelvic abscesses has become a very useful technique to approach these collections, which



**Figure 7.** Follow-up computed tomography showing some resolution of the collection.

are often deep in the pelvis and in areas that are difficult to access through percutaneous means.<sup>10</sup> EUS-guided drainage of these pelvic collections, if reachable by EUS, should be considered before the percutaneous route and, in so doing, can avoid the need for prolonged percutaneous drainage and multiple procedures.

## DISCLOSURES

Author contributions: S.F.J. West and D.L. Diehl contributed equally to this manuscript. D.L. Diehl is the article guarantor.

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Informed consent was obtained for this case report

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