

## Case Report

# Delayed mesh erosion after rectopexy: A rare surprise diagnosis

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## Abstract

Mesh rectopexy is a frequently performed surgery for the treatment of rectal prolapse. Mesh rectopexy may be complicated by mesh infection, mesh erosion/migration into bowel wall, and extrusion of mesh. Erosion of the mesh into the rectum is very rare. Delayed erosion of mesh into rectosigmoid can present after many years of mesh rectopexy and poses diagnostic dilemma. We report a case of delayed mesh erosion into the rectum diagnosed during sigmoidoscopy.

## Key words

Mesh erosion, mesh rectopexy, rectal prolapse, sigmoidoscopy

## Introduction

Mesh rectopexy is a frequently performed surgery for the treatment of rectal prolapse. Prolene mesh is a commonly used synthetic material in prolapse surgery. Erosion of prolene mesh into hollow viscus can infrequently cause serious complication. We report a rare case of delayed mesh erosion into the rectum diagnosed by sigmoidoscopy.

## Case Report

A 45-year-old female presented with a 3-month history of lower abdominal pain and constipation. The patient was a diagnosed case of hypothyroidism on regular medication. Seven years back, the patient underwent open abdominal hysterectomy for dysfunctional uterine bleeding and open abdominal mesh rectopexy for prolapsed rectum. Examination showed mild tenderness in the left iliac fossa. Blood investigations were normal. Per-rectal examination revealed a firm, irregular structure in the rectum. Sigmoidoscopy

showed a foreign body (mesh) protruding through the anterior rectal wall into the lumen [Figure 1]. It was located at 7 cm from the anal verge and not movable by an endoscopic snare. Biopsy from adjacent indurated mucosa showed chronic nonspecific inflammation. Abdominal computed tomography (CT) scan showed a foreign body in the rectum and mild circumferential rectal wall thickening [Figure 2]. Surgical exploration by transabdominal approaches showed erosion of prolene mesh into the anterior rectal wall. There were significant inflammation and adhesions noted around the mesh. Incision of anterior rectal wall and removal of mesh followed by repair of the rectum with diverting ileostomy were performed [Figure 3]. One month later, ileostomy loop closure was done. The postprocedure course was uneventful and progressed well at follow-up.

## Discussion

There is a widespread use of mesh for abdominal wall hernia repair. Mesh rectopexy is other commonly performed procedure for the treatment of rectal prolapse. Mesh-related complications include infection, erosion, migration, and extrusion.<sup>[1]</sup> It could occur soon after surgery or many years later. Delayed complication of mesh implantation is difficult to

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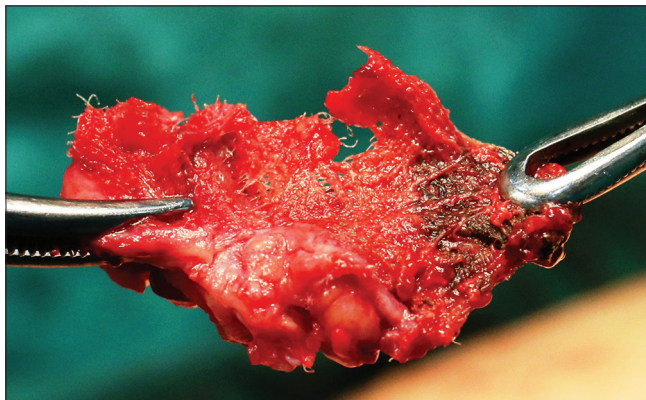
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**Figure 1:** Sigmoidoscopy showing a foreign body (mesh) protruding through the rectal wall



**Figure 2:** Computed tomography scan showing a foreign body (arrow) in the rectum and mild circumferential rectal wall thickening



**Figure 3:** Specimen of resected prolene mesh

diagnose a condition because of variable clinical presentations. Clinical presentations depend on the organ involved.

Intraluminal erosion or migration into a hollow viscus is an unusual complication of mesh repair. Erosion of the mesh into the rectum is very rare complication of mesh rectopexy.

Only handful of cases of intrarectal mesh erosion has been described in medical literature.<sup>[1-5]</sup> Erosion of mesh could occur soon after surgery or many years later, even after 15 years of mesh rectopexy. In a study, the delay between mesh rectopexy and clinical symptoms of mesh erosion ranged from 4 to 124 months.<sup>[2,3]</sup> These patients can present with constipation, bleeding per rectum, pus discharge, abdominal pain, and fever due to pelvic sepsis. Sometimes, there may be protrusion of mesh through anal canal with recurrence of rectal prolapsed.<sup>[4]</sup> Diagnosis can be established by either per-rectal examination or sigmoidoscopy. Abdominal CT-scan with contrast is a good tool for the diagnosis of mesh implant. However, misdiagnoses of prolene mesh have also been described in some reports.<sup>[6]</sup> Furthermore, CT-scan also helps in localizing the mesh in relation to hollow viscus.

Management of mesh erosion depends on location of erosion, size of mesh, presence of infection, severity of inflammation/adhesions, and depth of mesh protrusion into bowel lumen. It is usually managed by open surgical approaches (transabdominal or transanal route). Recently, a laparoscopic approach has also been described for the management of mesh erosion.<sup>[4]</sup> Mesh erosion is usually managed by mesh removal along with primary repair of the rectal defect. Intense inflammation, friability, and adhesions require diverting ileostomy/colostomy with secondary repair of the rectal defect.

The chronic friction caused by the persistent rubbing of the taut mesh against the adjacent bowel is the proposed mechanism of mesh erosion into the rectosigmoid wall.<sup>[5]</sup> Erosion triggered by foreign body reaction is another possible mechanism of delayed fistulization by synthetic mesh.<sup>[6]</sup> Mesh infection, larger mesh, and unrecognized rectal injuries are the proposed predisposing factors.<sup>[4]</sup> In comparison to biologic mesh, synthetic meshes have greater tensile strength, lower failure rate, and higher risk of erosion into adjacent tissue.

## Conclusion

Mesh erosion/migration is a very rare complication of mesh rectopexy. Delayed erosion into hollow viscus can present after many years of mesh rectopexy. Patients presenting with colorectal symptoms with a history of mesh rectopexy warrant prompt evaluation for mesh-related complications.

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## Conflicts of interest

There are no conflicts of interest.

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