International Urogynecology Journal (2019) 30:499–500
https://doi.org/10.1007/s00192-018-3782-4

IUJ VIDEO

Rectal mesh erosion after posterior vaginal kit repair

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Received: 8 June 2018 / Accepted: 28 September 2018 / Published online: 8 October 2018

Abstract

Introduction and hypothesis The present video shows a rare case of erosion through the full rectal wall into the rectum after a transperineal implant of a double-arm polypropylene kit.

Methods A 70-year-old woman underwent a transperineal implant of a double-arm polypropylene kit. One year after surgery, she developed bothersome symptoms in the posterior perineum including heaviness, pain and rectal bleeding during defecation. A clinical examination showed the presence of a part of the prothesis traversing the rectal cavity. A minimally invasive transanal approach was performed to remove the mesh and restore the rectal integrity.

Results This surgical technique demonstrates rectal mesh removal with a transanal approach.

Conclusions To our knowledge, this is a rare complication of rectal erosion of a posterior transperineal mesh kit. The aim of this video is to show a complete transanal approach to treating this serious complication avoiding the more invasive and traumatic abdominal procedure.

Keywords Rectal mesh erosion · Pelvic organ prolapse · Vaginal kit · Transanal approach

Introduction

Posterior vaginal wall prolapse is a herniation of the rectum through the rectovaginal fascia and posterior vaginal wall causing a protrusion into the vaginal lumen [1]. A variety of surgical procedures have been used in rectocele repair to enhance the anatomical and functional results and to improve long-term outcomes. In the last decades, synthetic materials have been suggested as an alternative for prolapse management in women. These materials reduce prolapse recurrence but have higher complication risk: in fact, in pelvic floor reconstructive surgery, mesh erosion is a major concern when using synthetic materials [2].

Thus, the Food and Drug Administration issued a safety communication and announcement in 2008, with an update in 2011, regarding the serious complications of transvaginal mesh placement for pelvic organ prolapse [3, 4]. In 2011, the International Urogynecology Association (IUGA)/International Continence Society (ICS) issued a joint report on complications directly arising from synthetic prosthesis insertion in female pelvic floor surgical operations, outlining the category, time, and site (CTS) classification system [5].

Endovaginal mesh erosion is more common and well documented. Erosion into the pelvic organs is more serious and complex to treat [6–8].

The present video shows a rare case of mesh erosion into the rectum after transperineal implant of the double-arm polypropylene kit. A minimally invasive transanal approach was performed to remove the mesh and restore the rectal integrity.

Methods

A 70-year-old woman underwent a transperineal implant of the double-arm polypropylene kit. One year after surgery, she

Electronic supplementary material The online version of this article (https://doi.org/10.1007/s00192-018-3782-4) contains supplementary material. This video is also available to watch on http://link.springer.com/. Please search for this article by the article title or DOI number and on the article page click on 'Supplementary Material.'

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developed bothersome symptoms. She complained of heaviness, rectal bleeding during defecation, and pain at the two arms of the transperineal mesh at the level of the ischial spine.

A clinical examination showed the presence of a part of the prosthesis floating into the rectal cavity.

After positioning an anal canal dilator, a visualization of the mesh material was grasped with two Kocher clamps. After removing the central part of the mesh, the procedure was continued with the blunt and sharp dissection of the inside arms of the mesh, which transpassed the lateral rectal wall.

This dissection was carried out until the passage of the two arms of the mesh near the ischial spine.

A plane was developed by the rectal wall following the remaining arm with the Kocher clamp, and complete removal of the mesh could be performed.

At this point, the rectal wall, including the muscularis mucosa, was reconstructed by a double layer of 2/0 resorbable sutures. During the reconstruction phase, a digital evaluation identified whether any residual foreign material had to be removed. After that, complete closure of the wounded area was mandatory to avoid complications, such as pelvic abscess.

Minimal bleeding occurred during the procedure. A continuous irrigation with hydrogen peroxide and povidone-iodine was carried out to reduce the bacterial growth as much as possible.

Results

The present video shows a minimally invasive approach to removing a vaginal mesh exposed into the rectum. The patient was discharged the day after surgery, and no other intra- or postoperative complication occurred. The defecography performed 3 months after the procedure showed no defects or abnormality in the morphology of the rectal wall. At the 1-year follow-up, the patient was asymptomatic with complete recovery of the rectal wall at physical evaluation.

Conclusions

Reconstructive pelvic surgery has utilized synthetic vaginal mesh for a long time.

Synthetic material has a high risk of mesh erosion. Mesh erosion can show up as endovaginal mesh erosion or intrapelvic organ erosion. The first is a major concern for the urogynecologist, but is more common and easier to treat. Erosion into pelvic organs is not as common and its treatment is a challenge. Some authors have described mesh erosion into the rectal cavity. Its removal varies from case to case; one author [9] (2015) described an abdominal approach, providing a colostomy; others perfomed transal removal [10]. In our opinion, treatment of these late and serious complications depends on the surgeon's experience and patient's condition. These patients have to be treated in a reference center for pelvic floor diseases. This video article may be useful for urogynecologists, showing a mini-invasive approach to remove synthetic material, avoiding open surgery and a more invasive technique, including a temporary colostomy.

Compliance with ethical standards

Conflicts of interest None.

References

1. Lisi G, Campanelli M, Grande S, Grande M, Mascagni D, Milito G. Transperineal rectocele repair with biomesh: updating of a tertiary refer center prospective study. Int J Color Dis. 2018. https://doi.org/10.1007/s00384-018-3054-2.
2. de Tayrac R, Sentilhes L. Complications of pelvic organ prolapse surgery and methods of prevention. Int Urogynecol J. 2013;24:1859–72. https://doi.org/10.1007/s00192-013-2177-9.
3. FDA Public Health Notification: Serious Complications Associated with Transvaginal Placement of Surgical Mesh in Repair of Pelvic Organ Prolapse and Stress Urinary Incontinence (2008) http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm061976.htm.
4. FDA Safety Communication: UPDATE on Serious Complications Associated with Transvaginal Placement of Surgical Mesh for Pelvic Organ Prolapse (2011) http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm262435.htm.
5. Haylen BT, Freeman RM, Swift SE, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint terminology and classification of complications related directly to the insertion of prostheses (meshes, implants, tapes) and grafts in female pelvic floor surgery. Int Urogynecol J. 2011;22:3–15 Neurourology and Urodynamics 30(1):2-12.
6. Surgery for women with posterior compartment prolapse (Review) Cochrane Database of Systematic Reviews. 2018, Issue 3. CD012975. https://doi.org/10.1002/14651858.CD012975.
7. Huffaker RK, Shull BL, Thomas JS. A serious complication following placement of posterior Prolift. Int Urogynecol J. 2009;20:1383–5. https://doi.org/10.1007/s00192-009-0873-2.
8. Zhang L, Zhu L, Xu T, Liang S, Lang J. Postoperative voiding difficulty and mesh-related complications after total prolift system surgical repair for pelvic organ prolapse and predisposing factors. Menopause J North Am Menopause Soc. 22(8):885–92. https://doi.org/10.1097/gme.0000000000000402*2015.
9. Lang P, Oliphant S, Mizell J, Austin B, Barr S. Rectal perforation at the time of vaginal mesh placement and subsequent abdominal mesh removal. Int Urogynecol J. 2015.
10. Guenin MO, Wolfisberg L, Kern B, Stoll L, Borbély Y, von Flüe M. Service de Chirurgie Viscérale, St- Claraspital, Basel, Suisse. Érosion rectale d'une prothèse pour cure de prolapsus vaginal (Prolift). January JOGC JANVIER. 2011.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.