Editorial Commentary

Laparoscopic ventral pouch pexy with biological mesh

Lilli Lundby, Anders Tøttrup

Department of Surgery, Aarhus University Hospital, Aarhus, Denmark

Correspondence to: Lilli Lundby. Department of Surgery, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N, Denmark. Email: Lilli@dadlnet.dk.

Comment on: Hardt J, Kienle P. Laparoscopic ventral pouch pexy with acellular dermal matrix (ADM)-a novel technique for the treatment of full-thickness pouch prolapse after restorative proctocolectomy and j-pouch. Int J Colorectal Dis 2018;33:1643-6.

Received: 03 June 2019; Accepted: 17 June 2019; Published: 18 June 2019.

doi: 10.21037/ales.2019.06.04

View this article at: http://dx.doi.org/10.21037/ales.2019.06.04

Pouch prolapse is a rare complication and there is limited data regarding the prevalence and surgical management of this condition. The prolapse can be mucosal or full-thickness.

Pouch prolapse was first described in the literature in 2004 by Ehsan et al who estimated the prevalence through a survey among members of the American Society of Colon and Rectal Surgeons. Eighty-three patients out of 23,541 patients (0.4%) presented with prolapse-related symptoms (1). Most of the recent literature following this paper consists of case reports and small cohort studies (2). In 2010 a retrospective review including 3,176 patients reported the incidence to be 0.3% (3). Eleven patients were diagnosed with pouch prolapse of which 7 patients were classified as full-thickness prolapse and 4 patients as mucosa prolapse. The median time from pouch surgery to prolapse was two years.

The management of full-thickness pouch prolapse is definitive surgical treatment but since it is a rare condition no consensus on a treatment algorithm has been established. The surgical procedures described in the literature include perineal approach to reduce the prolapse tissue, pouch pexy with or without a mesh, new pouch reconstruction or pouch excision with permanent ileostomy.

In the survey among ASCRS members 52 of the symptomatic patients underwent surgical repair—52% had a perianal approach and 48% a trans abdominal approach. Only in 6 pts (12%) a mesh was inserted. The pouch was preserved in 49 of the patients. Two patients had a new ileoanal pouch construction and only one pouch was converted to a permanent ileostomy. There were no data on long-term follow up and no report of associated recurrences (1).

In the study by Joyce all 7 patients with full-thickness pouch prolapse were treated with pouch pexy and only in one patient the pouch was fixated with a biological mesh. In three of the six patients who underwent suture pouch pexy the pouch prolapse recurred while the patient who had a mesh repair was evaluated after nine months had no recurrence. The patients with failure of the procedure were converted to a continent ileostomy formation (3). There are no data reporting possible recurrences on long-term follow up.

The most recent publication on surgical management of pouch prolapse is a case report of a laparoscopic ventral pouch pexy using acellular dermal matrix (ADM) to fixate the pouch. The pouch was mobilised and the ADM was sutured to the levators on both sides and to the ventral pouch. The pouch was raised by attaching the ADM to the promontory. The postoperative course was uneventful, and at 12 months follow up there was no symptoms or sign of recurrence. Based on the presented case and a review of the literature the authors concluded that laparoscopic ventral pouch pexy with a biological mesh performed by an experienced surgeon is recommended as a treatment option for full-thickness pouch prolapse—especially in fertile young women (4).

The etiology behind pouch prolapse is not well understood. In line with rectal prolapse, pouch prolapse is thought to mainly originate anteriorly (5). Low body weight and a family history of IBD are predisposing factors, whereas gender seems of no importance (6). Prolapse seems to occur as a fairly late complication after pouch construction, presumably with the stretched small bowel mesentery preventing prolapse in the early postoperative period. Whether straining during defecation plays a role is

not clarified, but it is an important question since abdominal reconstruction will not correct obstructed defecation due to a long rectal cuff.

Once a patient presents with symptoms of a prolapse, efforts should be made to clarify whether it is a full-thickness prolapse or just a mucosal prolapse. The evaluation includes endoscopy and a pouch defecography. It is important to notice the length of the rectal cuff, since reconstruction may require correction of a long rectal cuff if present.

When advocating a patient with pouch prolapse reconstructive surgery, it is important to inform him or her that damage to the pouch may occur during the procedure, and that this may require excision of the previous pouch and construction of a new one with the consequence of loosing some 30–40 cm of small bowel. Moreover, disconnection and reanastomosis of the pouch will impose a risk of anastomotic complications, which may later lead to permanent pouch failure and/or poor function (7,8).

Simple suture pexy seems insufficient for management of pouch prolapse because of a high recurrence rate (3). Accordingly, some kind of mesh reinforcement should be included in the repair. Synthetic mesh has been used extensively for both ventral and posterior rectopexy, with an acceptable risk of mesh erosion around 1% (9). It is not known if a similar figure can be reproduced when dealing with pouch prolapses. As demonstrated in a recent paper by Hardt and Kienle, laparoscopic ventral pouch-pexy using a biological mesh is technically possible (4), and may be attractive due to a presumed low risk of mesh erosion and infection. The long-term stability of a biologic mesh in terms of preventing prolapse, is still unknown. The final question to address is whether the pexy should be ventral or posterior. It would seem logical to perform a ventral mesh pexy, since prolapse seems to originate here. On the other hand, a posterior mesh pexy seems effective in preventing recurrence (3), and this position would preclude erosion into the vagina. Posterior mesh rectopexy has largely been abandoned due to risk of constipation and obstructed defecation (10). To what extent a posteriorly positioned mesh would lead to obstructed defecation in pouch patients is yet unknown, but it is one of the questions that need to be addressed in the future.

The low incidence of pouch prolapse makes it impossible for a single institution to obtain scientific evidence for any of the technical issues raised above. We suggest that an international collaboration is established to ensure that any future patient with pouch prolapse is enrolled into a prospective database, so that we, at some stage, will be able to advice our patients better about risks and benefits of the different types of reconstruction.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned by the editorial office, *Annals of Laparoscopic and Endoscopic Surgery*. The article did not undergo external peer review.

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at http://dx.doi.org/10.21037/ales.2019.06.04). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

References

1. Ehsan M, Isler JT, Kimmins MH, et al. Prevalence and management of prolapse of the ileoanal pouch. Dis Colon Rectum 2002;47:885-8.
2. Changchien EM, Griffin JA, Murday ME, et al. Mesh pouch pexy in the management of J-pouch prolapse. Dis Colon Rectum 2015;58:e46-8.
3. Joyce MR, Fazio VW, Hull TT, et al. Ileal pouch prolapse: prevalence, management, and outcomes. J Gastrointest Surg 2010;14:993-7.
4. Hardt J, Kienle P. Laparoscopic ventral pouch pexy with acellular dermal matrix (ADM)-a novel technique for the treatment of full-thickness pouch prolapse after restorative

proctocolectomy and j-pouch. Int J Colorectal Dis 2018;33:1643-6.
5. Khan F, Hull TL, Shen B. Diagnosis and management of floppy pouch complex. Gastroenterol Rep (Oxf) 2018;6:246-56.
6. Freeha K, Gao XH, Hull TL, et al. Characterization of risk factors for floppy pouch complex in ulcerative colitis. Int J Colorectal Dis 2019;34:1061-7.
7. Kiely JM, Fazio VW, Remzi FH, et al. Pelvic sepsis after IPAA adversely affects function of the pouch and quality of life. Dis Colon Rectum 2012;55:387-92.
8. Farouk R, Dozois RR, Pemberton JH, et al. Incidence and subsequent impact of pelvic abscess after ileal pouch-anal anastomosis for chronic ulcerative colitis. Dis Colon Rectum 1998;41:1239-43.
9. Consten EC, van Iersel JJ, Verheijen PM, et al. Long-term outcome after laparoscopic ventral mesh rectopexy: An observational study of 919 consecutive patients. Ann Surg 2015;262:742-7; discussion 747-8.
10. Sayfan J, Pinho M, Alexander-Williams J, et al. Sutured posterior abdominal rectopexy with sigmoidectomy compared with Marlex rectopexy for rectal prolapse. Br J Surg 1990;77:143-5.

doi: 10.21037/ales.2019.06.04
Cite this article as: Lundby L, Tøttrup A. Laparoscopic ventral pouch pexy with biological mesh. Ann Laparosc Endosc Surg 2019;4:57.

