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TECHNICAL NOTE

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Prevention of intraoperative complications during stapled excision of rectal mucosal prolapse

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Abstract Submucosal saline injection and triple purse-string are reported to prevent peritoneal stitching and mucosal pocketing, two intraoperative complications in patients who undergo a stapled transanal excision for internal mucosal prolapse causing obstructed defaecation.

Key words Rectal mucosal prolapse • Stapler • Constipation • Enterocele

Introduction

Rectal internal mucosal prolapse causing obstructed defaecation and solitary rectal ulcer syndrome may be successfully treated by transanal stapled excision, as previously reported [1]. A prospective multicentric study carried out on 63 cases demonstrated low postoperative complication rate and satisfactory short-term results (unpublished data). Two minor intraoperative complications occurred in our first cases, i.e. painful entrapping of peritoneocele within the stapler in a female with perineal descent (Fig. 1) and pocketing of the rectal mucosa due to an incomplete excision, leading to submucosal abscess (Fig. 2).

A prompt release of the peritoneocele was achieved by cutting the purse string in the first case, whereas the second one required a reintervention 3 weeks later to lay open the endorectal abscess cavity.

Our aim is to report two technical tips to prevent the occurrence of such complications.

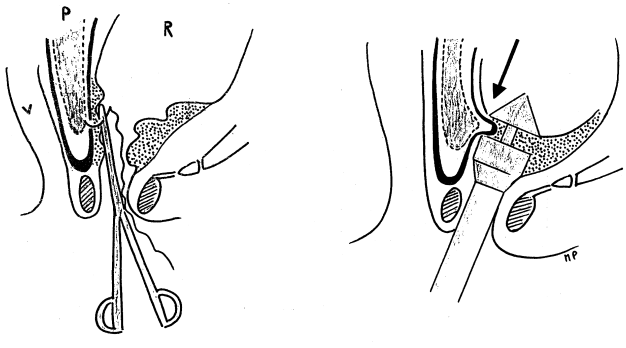

Fig. 1 *Left,* Performing the purse-string in a female patient with a peritoneocele (*P*) and an internal rectal mucosal prolapse causing obstructed defaecation. *Right,* The prolapsed Douglas sac may be entrapped anteriorly in the suture causing pain and intestinal damage when firing the gun (*arrow*). *V,* vagina; *R,* rectum

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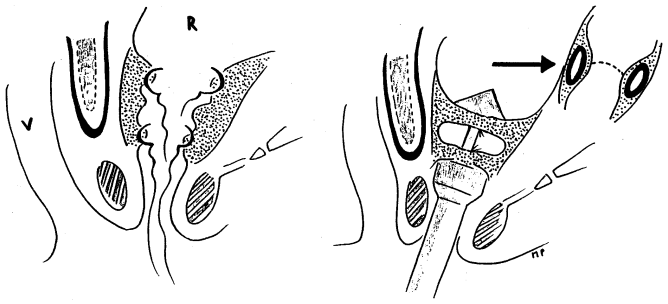

Fig. 2 *Left,* Two purse-string sutures are performed at the proximal and distal end of the internal rectal prolapse. *Right,* Once they are tied, an incomplete excision of the prolapse is achieved causing a mucosal pocketing and a consequent abscess (*arrow*). *V,* vagina; *R,* rectum

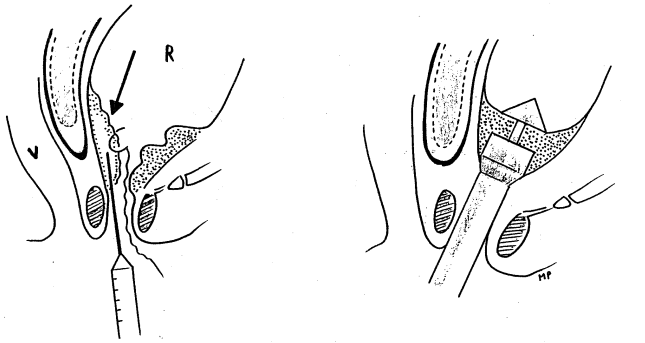

Fig. 4 *Left,* A triple purse-string is carried out at the level of the prolapsed mucosa. *Right,* A complete excision of the prolapse is achieved without residual pocketing. *V,* vagina; *R,* rectum

Technique

Preventing peritoneal and bowel damage

The injection of saline in the submucosal plane of the anterior aspect of the rectal wall may safely displace the tissue to be enclosed in the purse-string, leaving out the adjacent peritoneal wall in case of concomitant peritoneocele with enterocele (Fig. 3).

This procedure may be indicated in pluriparous female patients with perineal descent and history of chronic constipation and straining. A preoperative colpodefaecography showing an enlarged rectovaginal space or a defaecoperitoneography [2] might evidentiate an associated peritoneoenterocele and suggest special caution to the surgeon. Should the peritoneum be entrapped in the stapler's head and the patient be under spinal or local anaesthesia, she would complain of a sharp perineal pain during the operative manoeuvres.

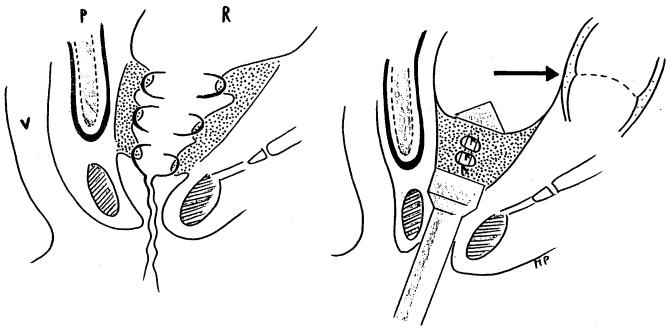

Fig. 3 *Left*, Preventing the entrapment of the peritoneocele (*P*) in the purse-string by injecting saline in the submucosal plane. *Right,* The prolapsed mucosa is enclosed in the stapler leaving the peritoneocele undisturbed. *V,* vagina; *R,* rectum

Preventing rectal mucosal pocketing

As shown in Figure 4, the rectal mucosal pocketing may be avoided by enclosing the whole prolapsed mucosa within the head of the stapler (ILS, Ethicon Endosurgery, Cincinnati Ohio, USA). This may be achieved by performing three purse strings at a distance of 2-3 cm from each other, or a spiral-shape purse-string with the new device PPH01, which does not require tying and provides a larger staple housing.

Alternatively, two double purse-strings may be carried out by firing the stapler twice. This has been done without problems in two of our patients. The bites of the purse-string sutures should be deep enough to enclose both mucosa and submucosa. Superficial bites may cause an incomplete excision of the prolapse and a consequent mucosal pocketing.

In conclusion, two operative complications of transanal stapled excision of rectal internal mucosal prolapse may be prevented by simple surgical manoeuvres.

References

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