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Small bowel obstruction from barbed suture following laparoscopic myomectomy—A case report

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ABSTRACT

Myomectomy is commonly performed for symptomatic fibroids in women who wish to conserve fertility. Laparoscopic myomectomy provides advantages as a minimally invasive procedure. To facilitate the closure of the uterine wound after enucleation of the fibroid, barbed sutures have been introduced as they can shorten the operative time and reduce the amount of bleeding. However, the use of barbed suture is not without risk. There were a few reports on the risks of barbed sutures in the literature. We report herein a case of acute abdomen because of small bowel entrapment and obstruction following the use of barbed suture in laparoscopic myomectomy. Surgeons using barbed suture in myomectomy should be vigilant on the possibility of this bowel complication whenever adverse clinical situation arises as the outcome could be serious if the condition was left unchecked.

1. Introduction

Laparoscopic myomectomy is commonly performed nowadays because of its advantages as a minimally invasive approach, with less postoperative pain, better cosmesis, shorter hospital stay, and quicker recovery. Laparoscopic myomectomy consists of the following essential steps of fibroid enucleation, suture repair of uterine wound, and the extraction of fibroid specimens through a small portal incision. Laparoscopic suturing technique is a requisite for repair of the uterine wound which is an integral part of myomectomy. Yet one has to go through a long learning curve before one can master the skill of laparoscopic suturing and knot tying to pursue this laparoscopic approach, but often some surgeons find the technique of suturing laparoscopically very skill demanding. Proficiency in laparoscopic suturing is essential not only in serving a proper approximation of the uterine wound, with occlusion of dead spaces, as well as to control any bleeding. Conventional sutures carry the drawbacks of requirement for tying surgical knots for anchorage, higher density of foreign suture material, need to maintain constant tension on the suture, risk of strangulating the tissue with excessive tension, and the reduction in the tension necessary to hold tissues together postoperatively. On the contrary, barbed suture with its special design can eliminate knots altogether because of its non-slip attribute. Although barbed sutures are frequently used in myomectomy [1], bowel complications associated with their use in laparoscopic myomectomy was seldom reported [2–4]. This case report describes a late complication of entrapment and erosion of the small bowel following the use of barbed suture in laparoscopic myomectomy, and a review of the literature is presented.

2. Presentation of case

A 33 year-old woman presented as an emergency with severe abdominal pain. The pain became progressively severe. She had regular monthly cycles and she was on the third day of her period. Six weeks ago, hysteroscopy and laparoscopic myomectomy were performed for heavy periods and multiple fibroids. On admission she was afebrile and her vital signs were within normal range. The abdomen was mildly distended and there were significant tenderness and rebound tenderness on palpation. Vaginal examination also elicited marked tenderness on rocking of the cervix. Transvaginal ultrasound scan showed a bulky uterus of normal configuration and normal looking ovaries. No adnexal mass was detected. A small collection of fluid was present in the Pouch of Douglas. In view of the presence of signs consistent with acute peritonitis, an emergency laparoscopy proceeded. Blood stained fluid was found at the vesico-uterine pouch and the Pouch of Douglas. Some small bowels were moderately dilated (Fig. 1a). A loop of small bowel was firmly adhered to the right uterine cornu through a band of adhesion (Fig. 1b), causing an obstruction. Posteriorly the rectum was extensively adhered to the back of the uterus on the left side (Fig. 1c). The adhesions over the rectum were careful lysed using both blunt and sharp dissection. A strand of undyed suture with spiral barbs connecting to the uterus (Fig. 1d) was found to be buried in the mesentery of the rectum (Fig. 2a). The suture was cut and removed and thereby freeing the rectum. The integrity of the rec-

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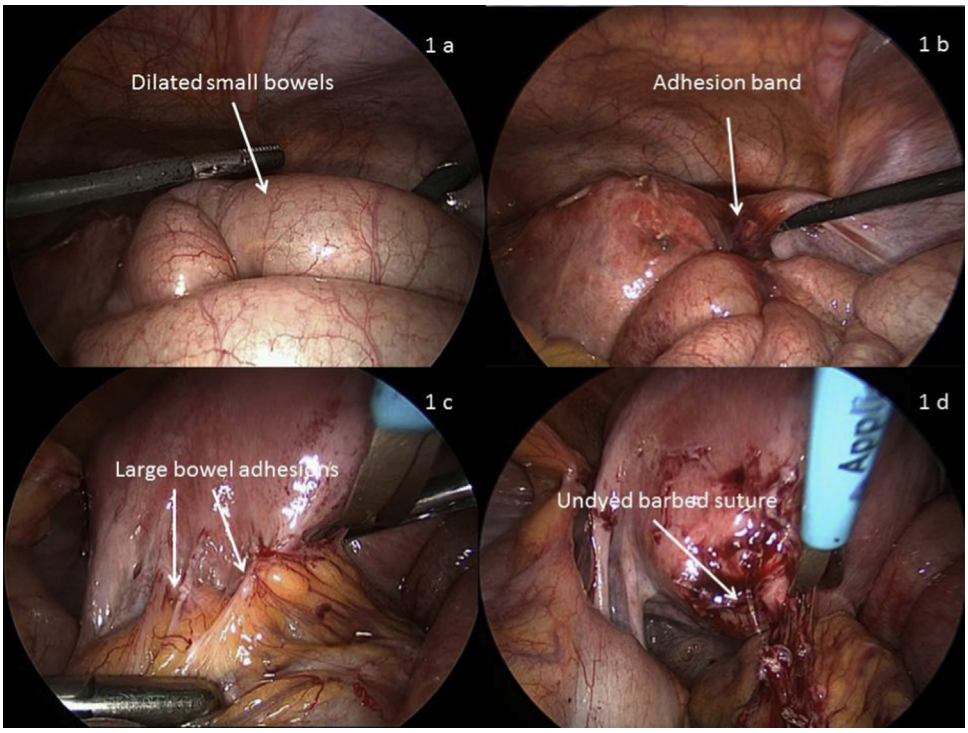

Fig. 1. (a) showed dilated small bowels; (b) adhesion band between small bowel and uterus; (c) adhesions between large bowel and uterus; (d) barbed suture arising from uterus exposed after adhesiolysis.

tum was checked and confirmed. The adhesion band connecting the small bowel to the uterus was separated after yielding to gentle traction and counter-traction applied to both organs (Fig. 2b). Thereafter, an undyed barbed suture was revealed following the release of the small bowel (Fig. 2c). Inspection of the detached small bowel revealed the presence of a 2 cm × 1 cm erythematous area that corresponded to the site of the prior adhesion (Fig. 2d). Careful examination of the area concerned showed only erosion of the serosal aspect of the small bowel without any perforation. Suturing of the eroded area using 3/0 Vicryl on the sero-muscular layer of the bowel was performed. All remaining redundant barbed sutures seen arising over the rest of the uterus were excised flush with

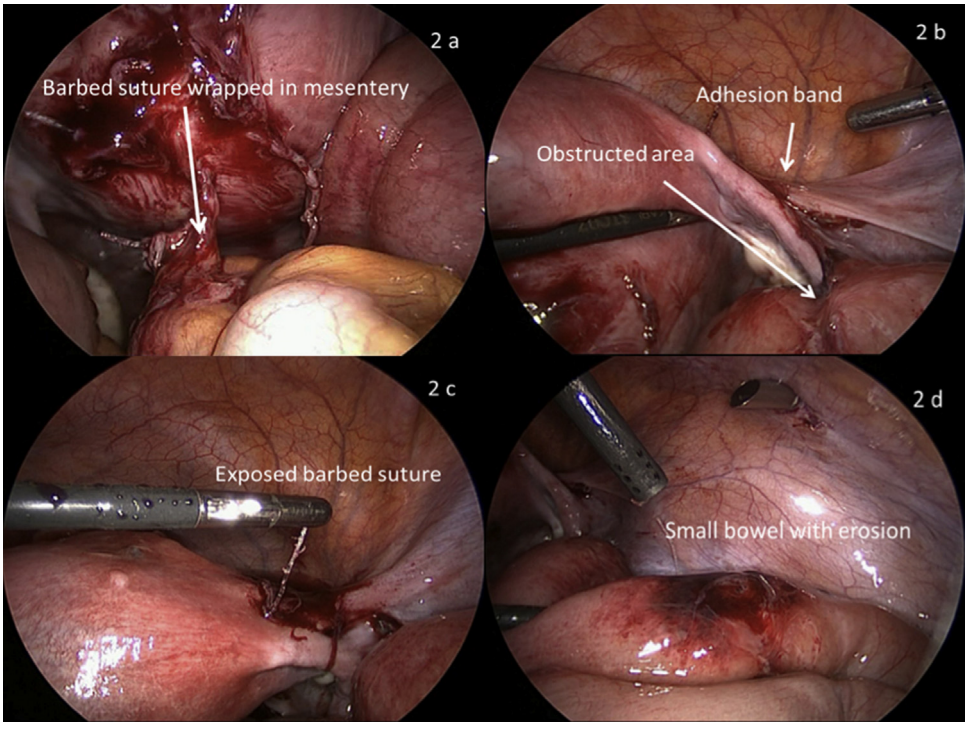

Fig. 2. (a) barbed suture wrapped in mesentery; (b) showed adhesion band and obstructed area on the small bowel; (c) barbed suture exposed from the uterus; (d) erosion on small bowel.