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Video article

Ghost ileostomy in anterior resection for bowel endometriosis: technical description

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Institutional Review Board/Ethics Committee ruled that approval was not required for this study.

Keywords: Laparoscopy, Bowel Endometriosis, Colorectal Anastomosis, Ghost Ileostomy, Ileostomy.

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Abstract Text:

Objective:

To demonstrate our application of the “ghost ileostomy” in the setting of laparoscopic segmental bowel resection of a symptomatic bowel endometriosis nodule.

Design:

Technical “step-by-step” surgical video description (educative video)

Setting: University Tertiary Hospital. Institutional Review Board ruled that approval was not required for this study. Endometriosis affects the bowel in 3%-37% of all cases, and in 90% of these cases the rectum or sigmoid colon are also involved. Infiltration up to the rectal mucosa and invasion of >50% of the circumference have been suggested as an indication for bowel resection (1). Apart from general risks (bleeding, infection, direct organ injuries) and bowel/bladder dysfunctions, anastomotic leakage is one of the most serious complications. In women with bowel and vaginal mucosa endometriosis involvement, there is a risk of rectovaginal fistula after concomitant rectum and vagina resections. Hence, for lower colorectal anastomosis, the use of temporal protective ileostomy is usually recommended in order to prevent these complications, but carries on stoma- related risks as hernia, retraction, dehydration, prolapse and necrosis. Ghost ileostomy is a specific technique firstly described in 2010, who gives an ease and safe option to prevent anastomotic leakage with maximum preservation of patient quality of life (2). In case of anastomotic leakage, the ghost (or virtual) ileostomy is simply converted, under local anesthesia, into a loop (real) ileostomy by extracting the isolated loop through an adequate abdominal wall opening. In principle, avoiding a readmission for performing the closure of the ileostomy, with all the costs related, mean an important saving for the hospital management.

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Also, applying protective rectal tube in intestinal anastomosis may have a beneficial effect (3). These options are performed by general surgeons in oncological scenarios, but their use in endometriosis has never been described.

Interventions:

In a 32-year-old woman with intense dysmenorrhea, deep dyspareunia, dyschesia, and cyclic rectal bleeding, a complete laparoscopic approach was performed using blunt and sharp dissection with cold scissors, bipolar dissector and a 5mm LigaSure Advance (Covidien, Valleylab, Norwalk, Connecticut). An extensive adhesiolysis restoring the pelvic anatomy and endometriosis excision were done. Afterwards, the segmental bowel resection was performed using linear and circular endo-anal stapler technique with immediate end-to-end bowel anastomosis and transit reconstitution. Once anastomosis was done, the terminal ileal loop was identified, and a window was made in the adjacent mesentery. Then, an elastic tape (vessel loop) was passed around the ileal loop, brought out of the abdomen through the right iliac fossa 5 mm port site incision and, fixed to the abdominal wall using non- absorbable stitches. Finally, a trans-anal tube was placed for five days. Patient was discharged in the 5th day postoperatively without any complications. The tape was removed 10 days after surgery and the loop dropped back. Two months after the intervention, the patient remains asymptomatic.

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Conclusion:

Ghost ileostomy is a simple, safe and feasible technique available in the setting of lower colorectal anastomosis following bowel endometriosis resection.

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Video Legend:

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Technical "step-by-step" laparoscopic surgical procedure of a severe deep endometriosis infiltrating the vagina and the rectum. The patient, with 32-year-old, had complains of dysmenorrhea, deep dyspareunia, dyschesia and cyclic rectal bleeding. It was performed an extensive adhesiolysis, rectum and vaginal endometriosis excision. After bowel segmental resection and vagina closure, it was performed an omentoplasty covering the anastomosis, a ghost ileostomy and a transanal tube placement.

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