

Polyp of the cecum. Laparoscopic-assisted polypectomy

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SUMMARY: Polyp of the cecum. Laparoscopic-assisted polypectomy.

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The Authors discuss on a laparoscopic-assisted approach for excision of a sessile villous adenomatous polyp of the cecum, unresectable by endoscopy. Because of the large implant of the polyp, endoscopic polypectomy was considered at high risk and a surgical laparoscopic procedure was scheduled for removal of the lesion. After right colon mobilization, an intraoperative endoscopy confirmed the location of the polyp in the posterior wall of the cecum, closed to the ileo-cecal valve. A small 10 cm laparotomy, through which the cecum was pulled out the abdominal cavity, was performed. Then, a minimal colotomy along the intestinal taenia was carried out to allow a safe and complete excision of the polyp.

This laparoscopic approach differs from the other laparoscopic-assisted methods reported in the Literature since it provides at the same time the postoperative advantages associated with minimal access surgery and a safe oncological removal of the polyp with low risks of complications.

RIASSUNTO: Polipo del cieco. Polipectomia assistita per via laparoscopica.

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Gli Autori discutono sull'approccio laparoscopicamente assistito per l'asportazione di un polipo adenomatoso sessile villosa del cieco, non resecabile mediante endoscopia. A causa della larga base d'impianto del polipo, la polipectomia endoscopica è stata considerata ad alto rischio ed è stato pianificato un intervento chirurgico per via laparoscopica per la rimozione della lesione. Dopo la mobilizzazione laparoscopica del colon destro, l'endoscopia intraoperatoria ha confermato la posizione del polipo nella parete posteriore del cieco, vicino alla valvola ileo-ciecale. È stata quindi eseguita una piccola laparotomia di 10 cm, attraverso la quale è stato esteriorizzato il cieco dalla cavità addominale. Infine è stata effettuata una colotomia di minima lungo la tenia intestinale per consentire una sicura e completa asportazione del polipo.

Questo approccio laparoscopico differisce dagli altri metodi laparoscopicamente assistiti riportati in letteratura in quanto fornisce al tempo stesso i vantaggi postoperatori associati alla chirurgia con accesso di minima e una rimozione oncologicamente sicura del polipo con bassi rischi di complicanze.

KEY WORDS: Large bowel - Adenomatous polyp - Laparoscopic surgery.
Colon - Polipo adenomatoso - Chirurgia laparoscopica.

Introduction

Endoscopic polypectomy is the procedure of choice to remove most of the small or pedunculated colonic polyps with a low complication rate (1-3).

However, for some polyps colonoscopic removal can be challenging because of their difficult location, size or sessile typology (4). Endoscopic polypectomy in these conditions can be associated with an increased risk of co-

lonic perforation (5) and, therefore, surgical treatment is sometimes still indicated (3, 6, 7).

Segmental colectomy is the surgical procedure often performed to remove polyps not suitable for endoscopic techniques (3,6,8). With the advent of laparoscopic surgery, which allows less postoperative pain, shorter postoperative ileus and quicker recovery (3,9,10), colon typical resections or colon wedge resections have been performed with this minimally invasive approach (11,12). In addition, in order to reduce complications following colon resections other laparoscopic-assisted procedures have been proposed (6,8,12,13).

Colonoscopic polypectomy under laparoscopic vision have been recently reported in the literature (6,8,11,14). However this approach may result in an incomplete oncological removal of the polyps.

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The authors report a laparoscopic-assisted technique for removal of a sessile polyp of the cecum which allows at the same time a complete oncological polipectomy and a reduced risk of leaking complications.

Case report

A 66 y.o. white male was admitted to our hospital because of a large sessile polyp of the cecum. The patient had a benign polyp in the rectum removed three years before. At colonoscopy, performed during the follow-up, a sessile polyp measuring about 5 cm, located in the cecum, was diagnosed.

Biopsy revealed a villous adenomatous polyp with moderate dysplasia. Because of the large implant and the location of the polyp, endoscopic polypectomy was considered at high risk and a surgical procedure was scheduled for removal of the lesion.

Through a laparoscopic approach, after the insertion of a 10 mm trocar in the umbilical region and two five mm trocars positioned in the subxifoid area and in the right iliac fossa, the ascending colon and the hepatic flexure were dissected and mobilized. The polyp was then localized through an intraoperative colonoscopy (Fig. 1). The polyp was close to the ileo-cecal valve, in the posterior wall of the cecum. A small mini-laparotomy of about 10 cm was performed and the cecum was pulled out through the abdominal wall. A minimal colotomy was accomplished along the antimesenteric taenia (Fig. 2). Radical excision of the sessile polyp was then completed (Fig. 3). Frozen section confirmed the pre-operative diagnosis and showed no carcinomatous degeneration.

Suture of the colotomy in double layer and closure of the mini-laparotomy and laparoscopic accesses were finally performed.

No post-operative complications were observed and the patient was discharged from the hospital in day 4 after surgery. No recurrence were observed during a two year follow up.

Discussion

Endoscopic polipectomy is nowadays the standard routine procedure to remove most of colonic polyps. However, polyps that are large and sessile or located in difficult positions, such as close to the ileocecal valve, are technically difficult to resect endoscopically (4).

The incidence of complications increases with polyps larger than 3-4 cm, particularly in the thin-walled cecum and ascending colon (15). In such cases, in fact, there is a high risk of inadvertent perforation and uncontrollable bleeding. Moreover there is also a risk of inadequate margins of excision (6).

Polyps not suitable for endoscopic removal are traditionally removed by a conventional open colonic resection. Surgical strategies include segmental resection of the bowel where the polyp is located, or hemicolectomies or subtotal colectomies if oncological more aggressive resections are needed. Of course location, size and number of polyps obviously dictate type and extent of resection and each of these procedures carries its own morbidity and mortality. In the last ten years, there was a great development of laparoscopic colonic surgery and



Fig. 1 - Laparoscopic visualization of the polyp's site assisted by colonoscopy.

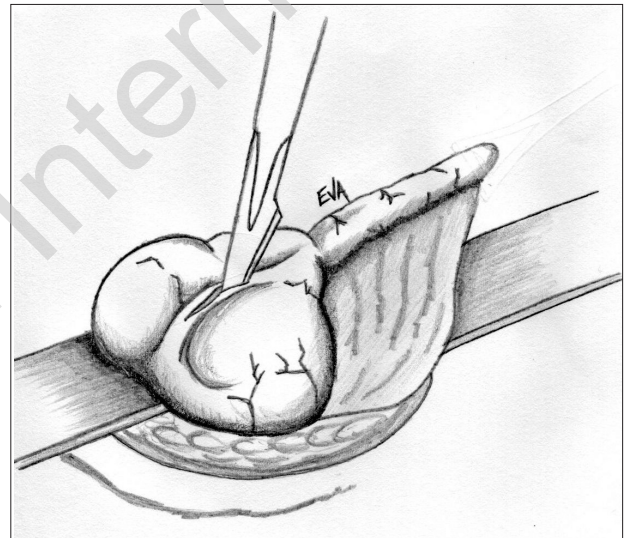


Fig. 2 - Colotomy performed along the antimesenteric taenia.



Fig. 3 - Excision of the polyp under direct vision.

so many procedures can now be performed with the laparoscopic approach (7,9,10).

In the management of benign colorectal diseases, in fact, laparoscopy is nowadays the treatment of choice because it is associated with quicker recovery and favorable short-term outcome. In particular colorectal polyps are regarded as one of the best indications for laparoscopic colorectal surgery (4). This procedure is the most suitable for patients affected by moderate size polyps, sessile polyps and polyps which are located in difficult bowel sites, where is hard to reach by colonoscope (14). Laparoscopic resection is preferred option in those patients who are elderly and with comorbid medical conditions. Laparoscopic resection seems to be suitable also in case of malignant invasion because it can obtain on adequate resection (3).

Recently, some Authors (3,6,11,13,14) described a combined technique in which laparoscopic surgery has been performed in combination of the colonoscopic polypectomy. This technique of laparoscopic-assisted colonoscopic polypectomy is advisable for polyps which are resectable in principle by colonoscopy but are difficult to reach because of their anatomic site or large size. The addition of laparoscopy enables the polyp to be presented optimally for colonoscopic snare polypectomy, and, on the other hand, this allows an immediate way of monitoring possible colonic perforations. Laparoscopy provides an added level of safety because it can visualize the serosal surface of the bowel and, therefore, any thermal effects of snare polypectomy can easily detected (8). Moreover, in the event of an injury, it can be repaired with the same laparoscopic approach.

However, if the polyp reveals the presence of inva-

sive cancer at the frozen section, the laparoscopic-assisted approach is not suitable and in this case a colectomy should be performed by laparoscopy or conversion to open surgery (8).

We described in this article a surgical technique that is indicated in selected cases, when endoscopic polypectomy is contra-indicated because of presence of difficult polyps for their location, size or sessile typology. In our opinion the technique proposed is of value when the segment of the colon where the polyp is located cannot be directly observed and monitored by laparoscopy during the intraoperative polypectomy. Differently from the other technique of endoscopic polypectomy assisted by laparoscopy reported in the literature, our approach is therefore more convenient and at lower risk when the large sessile polyp is located in the posterior aspect of the ascending colon. In this case colon mobilization is essential and at this point a small laparotomy and a minimal colotomy along the taenia allows a safe and complete removal of the polyp.

Conclusions

Our laparoscopic-assisted approach is safe in the management of large and or difficult colonic polyps that are very difficult or impossible to remove colonoscopically. The proposed laparoscopic approach with a small incision on the abdominal wall and a minimal colotomy in order to perform a radical excision of the colonic non-malignant polyp provides the postoperative advantages associated with minimal access surgery, including shorter hospital stays, early return to full activity and long term results.

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