Laparoscopic approach in a case of retroperitoneal and mesorectal haematoma following STARR procedure

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ABSTRACT

INTRODUCTION: Stapled transanal rectal resection (STARR) is a widely accepted procedure for treatment of obstructed defecation syndrome.

PRESENTATION OF CASE: We analyzed major bleeding following STARR and exposed our experience regarding its conservative management with particular attention about diagnostic and therapeutic aspects.

DISCUSSION: A case by case discussion should be carried out and treatments should be driven by the features and the progression of the haematoma with regards to size, inflammatory signs or severe rectal obstruction.

CONCLUSION: If a second surgical time and exploration is considered, laparoscopy should be an effective choice while laparotomy, stoma or rectal resection should be considered in those cases with strong suspicious of peritonitis and pelvic abscesses.

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1. Introduction

Stapled transanal rectal resection (STARR) is a widely accepted technique with transanal approach for the treatment of obstructed defecation syndrome (ODS) due to rectocele or rectal prolapse. Literature has focused the attention on indications and outcome but a general view upon the management of postoperative complications has been discussed in few papers, mainly case reports.1,2

We report our experience regarding the conservative management of postoperative major perirectal bleeding following STARR procedure.

2. Patient and methods

A 54-year-old woman was referred to our proctological outpatient clinic for chronic constipation and rectal minor bleeding. A full clinical examination and diagnostic assessment were carried out and an ODS was the final diagnosis. Colonoscopy excluded malignancies and other colonic diseases such as inflammatory bowel diseases. An imaging study was performed with Defecation MRI showing moderate rectocele and rectal prolapse. After failed conservative treatment patient was clinically revaluated and STARR procedure proposed. Under spinal anesthesia, patient was placed in the Lloyd-Davis position and a proctological evaluation was carried out with circular anal dilator (CAD) part of the set PPH-03 (Ethicon®); STARR was performed with the technical steps illustrated by Longo A. and other authors.3,4 Transanal haemostatic absorbable gelatin sponge (Spongostan Anal) and Foley catheter were placed into the rectum. At the end of surgery patient received a local anesthesia by infiltrating a Chirocaine 750 mg diluted within 20 cc of sodium chloride solution (0.9%). Local anesthesia was performed through infiltration of four quadrants around the anal verge and a pudendal nerves block was performed too.

Postoperative analgesia was administered through an endovenous infusion of Paracetamol 1000 mg three times per day and ketorolac tromethamine 30 mg two times per day. In addition, Oxycodon 5 or 10 mg (oral) was used as painkiller in case of severe pain, over than 4 in the visual analog scale (VAS; 0 = no pain and 10 = maximum pain experienced). At the first postoperative day a haemochrome test showed a low blood level of haemoglobin, decreasing slowly from 12 g/dl to 7.5 g/dl in about 24 h without any hemodynamic dysfunction. The transanal catheter drained only some clots but the digital exploration of the anorectum suggested an extraluminal bleeding. Patient was submitted to an abdominal CT scan 24 h following surgery: a perirectal haematoma of 10 × 8 × 8 cm was demonstrated to involve the mesorectal space with an active spreading of contrast (Figs. 1 and 2). Hemodynamic parameters of the patient were stable and a conservative management was considered: (1) Blood transfusions (2 units); (2) Antibiotic therapy through and endovenous infusion of Metronidazole 400 mg three times per day and Cefazoline 1000 mg three times per day; (93) fasting and endovenous parenteral nutrition.
Abdominal CT scan showed a mesorectal haematoma (10 × 8 × 8 cm) with an active spreading of contrast (arrow) and rectal lumen completely displaced (*).

Blood exams were repeated showing stable values of haemoglobin even 5 days following surgery. Fever, pain and urinary retention were not observed. At the 7th postoperative day there were no signs of further bleeding and patient was stable so that a surgical exploration was considered: patient was operated on with laparoscopic approach. Abdominal exploration showed a bulging in the lateral perirectal spaces and a wide ecchymosis involving retroperitoneum and mesocolon due to the spreading of the blood from the mesorectum (Fig. 3). The perirectal spaces were opened, haematoma was evacuated and a drain placed. A second operative time was a transanal exploration with the patient in Lloyd-Davis position: a small leak was observed in the staple line so that a reinforcing hand-sewing was performed with a continuous absorbable suture. A transanal drain was placed in the rectum. Five days later patient was feeding and drains were removed because we did not observe fever or adverse events. Levels of haemoglobin and white blood cells were stable and patient was discharged at the 6th postoperative day after spontaneous defecation. Patient has been controlled at the outpatient clinic for the following 12 months and only a self-limited fecal urgency was complained in the first 2 months after surgery.

3. Discussion

Staple surgery both for hemorrhoidal disease and obstructed defecation syndrome (ODS) is a relative young procedure, nowadays widely accepted and its complications are extensively known. Worldwide surgeons know that there is no surgery without potential minor or major complications. The interest of international literature about STARR and stapled hemorrhoidopexy (SH) has been very high in the recent past and potential postoperative morbidities have been widely criticized. Moreover, in 2005 the American Society of Colon and Rectal Surgeons underlined the rare occurrence of potentially devastating complications5 and in 2007 a first systematic review reported early and late outcome after SH or STARR.6 Compared to other procedures commonly performed in other surgical fields, such as laparoscopic cholecystectomy, STARR and SH have been always critically analyzed but in few cases suggestions regarding complications management have been proposed. Pescatori2 in 2008 reviewed the adverse events after SH and STARR procedures in the international literature and discussed the management of these postoperative complications. Naldini1 in 2009 reported a compendium of postoperative morbidities after SH and STARR. All Units of Coloproctology belonging to the Italian Unitary Society of Coloproctology (SIUCP) were asked by a questionnaire to return documentation of serious complications. In this multicenter paper about complications following staple transanal surgery, a total of 15 cases of major bleeding were reported and their management described. Transanal haemostatic suture, transperineal drainage, arterial embolism or transvaginal tamponade, even using a Sengstaken–Blackemore tube, represent the variety of treatment adopted. It is been suggested that unless bleeding is unstoppable or peritonitis is present, laparotomy should not be performed because this may result in further complications, including infection.1

Moreover, with regard to postoperative rectal bleeding, in 2004 a large series (3000 patients) reported a readmission after SH
In any case, the role of staple features has been widely discussed in papers. As we learn in surgical practice, clinical progression required reoperation in 2.7–11% of patients in other procedures performed to treat hemorrhoids and transanal stapling surgery is not an exception. In conclusion, when a major bleeding occurs after SH/STARR and patient is stable the extent of the haematoma should be staged with a CT-scan. In the following management, a case by case discussion is mandatory within the surgical team and further treatments should be driven by the features and the progression of the haematoma with regards to size, inflammatory signs or severe rectal obstruction. If a second surgical time and exploration is considered, laparoscopy should be preferred taking into account its well known advantages. Laparotomy, stoma or rectal resection should be considered in those cases with strong suspicious of peritonitis and pelvic abscess.

**Conflicts of interest**

The authors report no conflicts of interest to report.

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**Ethical approval**

Not required.

**Author contributions**

All authors contributed equally to the present paper. Cerullo G. wrote the article and Martellucci J reviewed it before the submission.

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**Key learning points**

- Management of complication after Anal Staple surgery.
- Bleeding after STARR procedure.
- Laparoscopic approach to Bleeding complications.
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