

Feasibility of stapled haemorrhoidopexy in Day Surgery

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Abstract. – The aim of this study was to report the results of a stapled haemorrhoidopexy for patients with second to fourth degree of rectal prolapse, with reference to its feasibility as a day-surgery procedure.

Between January 2005 and December 2007, 203 patients with symptomatic hemorrhoids have been operated for stapled haemorrhoidopexy. Surgery was performed between the 8:00 to 9:00 am using a standard sedation and a regional perianal local block. All the patients were discharged from the hospital at 18:00 of the same day of the surgery. Postoperative analgesia with a disposable device for infusion, after 24 hours was removed at home.

Four patients after 3 hours from the operation have had an anal bleeding in the hospital. Four patients have had an anal bleeding at home during the night. One patient has had an important anal pain at home during the night.

Stapled haemorrhoidopexy in day surgery may be a viable addition to the therapy for rectal prolapse with the advantages of an early discharge and a lower cost than a longer hospitalization. With this procedure, performed in a single day, we provided a value-added service to the patients with less cost and without a significant compromise on safety and efficacy.

Key Words:

Stapled haemorrhoidopexy, Day surgery, Rectal prolapse, Ambulatorial hemorrhoids.

Introduction

Haemorrhoidectomy is one of the most commonly performed anorectal surgical procedures. It is considered the most effective treatment for

second, third and fourth degree hemorrhoids. Conventional haemorrhoidectomy, either by Milligan-Morgan excision or by Ferguson's closed technique, is an extremely painful procedure¹.

In 1998, Longo² presented stapled haemorrhoidopexy (PPH) as a new surgical treatment for hemorrhoids or, more correctly, rectal prolapse.

PPH is gaining wide acceptance as an interesting, safe and less painful technique in order to acquire a more elevated standard of outcome requested in the present welfare, allowing an earlier discharge from hospital. PPH is a more efficacious procedure as operating time is significantly less compared to conventional haemorrhoidectomy, with a faster surgical and functional recovery³.

Hospital discharge was significantly earlier after a PPH procedure compared to conventional haemorrhoidectomy⁴. Haemorrhage is one of the most serious early complications⁵⁻⁷ and is a severe complication in day surgery.

The aim of this study is to report the results of PPH for patients with second to fourth degree hemorrhoids, with reference to its feasibility as a day-surgery procedure.

Materials and Methods

Patients

All the patients of our series comes from our ambulatory with symptomatic hemorrhoids. Our standard procedure in these cases was to try, when was possible and feasible, a first medical treatment of the symptoms of the hemorrhoids with dietary suggestions to avoid stypsis, by dis-

suading the patients to eat some irritating foods. In many cases, when was present a flogosis of the rectal mucosa visible during an anoscopy, we used a rectal mesalazine (500 mg/day for 15 days). If dietary suggestions and medical therapy not gate to any result the patients were selected for surgical procedure.

In our Department between January 2005 and December 2007, 203 patients (80 females and 123 males) with symptomatic hemorrhoids have been selected and operated by the same surgeon for stapled haemorrhoidopexy.

Preoperative evaluation has been obtained in all cases during a single-morning pre-hospitalization recovery. Preoperative evaluation included a medical history, physical examination, routine laboratorial tests, cardiologic evaluation, anesthesiologic evaluation. Rectosigmoid-colonoscopy was performed preoperatively only for patients with important changes in bowel habit, a previous history of colorectal cancer and for all patients over 50.

Inclusion criteria included: selected prolapsing hemorrhoids with spontaneous reduction (Grade II); prolapsing hemorrhoids requiring manual reduction (Grade III); uncomplicated hemorrhoids, irreducible by the patient but reducible at surgery (Grade IV); failure to alleviate haemorrhoidal symptoms by other methods (e.g. rubber band ligation, etc.).

Exclusion criteria included⁸: abscess, gangrene, anal stenosis, full-thickness rectal prolapse, condilomatosis, acute rectocolitis, haemorrhoidal thrombosis.

General inclusion criteria for the Day Surgery: patients were classified ASA1 or ASA2 according with the American Society of Anesthesiologists: no pregnancy; no obesity (BMI <35); the patients must have to pass the first night after the surgical procedure in a place not more far from the hospital then 1 hour using a car; the patients must have to pass the first night after surgery with someone (the wife, the parents, etc.); the patients must have to possess a telephone.

All patients were informed about the technique and the possible complications preoperatively⁹⁻¹¹ (Table I).

This retrospective study included patients with a rectal prolapsed from second-degree and fourth-degree.

Surgical Instruments

The requested instruments for PPH are included in the 33-mm set of instrument HCS33 (we

Table I. Possible postoperative complications after procedure for prolapsed hemorrhoids (PPH).

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| <ul style="list-style-type: none"> • Rectal bleeding • Pain and swelling • Fecal incontinence • Urgency and rectal irritation • Anastomotic stenosis • Rectal perforation • Rectovaginal fistula |
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used in 103 patients the model PPH01 and in 100 cases the model PPH03),(Ethicon Endo-Surgery Inc., Cincinnati, OH, USA):

- Hemorrhoidal circular stapler (HCS33 model PPH-01 or PPH-03);
- Suture threader (ST100);
- Circular anal dilator (CAD33);
- Purse-string suture anoscope (PSA33).

Surgical Procedure

Surgery was performed between the 8:00 to 9:00 am using standard sedation anaesthesia with Fentanyl 0,1-0,2 mg i.v. and Propofol 2,5 mg/kg followed by face mask and maintained with Propofol 20-30 mg. Patients were operated in lithotomy position. In addition we always perform a regional anesthesia with a perianal local block¹². 50 ml of Ropivacaine 5 mg/ml was injected approximately 3 cm from the anal verge through the anococcygeal ligament into the ischio-rectal fossae to the level of the levator muscle. 5 ml of the anesthetic solution was injected while withdrawing the needle. The needle was then directed at 45- anteriolaterally and 5 ml was injected on both sides in the perisphincteric space while the needle was withdrawn. This was repeated in the same fashion anteriorly in the perineum. The anesthetic block was finished with 10-ml columns of anesthetic solution on each side of the anus. The onset of anesthesia was approximately three minutes, with blockage of the branches to the anus from the anococcygeal nerve, pudendal nerve, and the inferior hemorrhoidal nerves. Complete anesthesia of the perianal skin and the anal canal ensues, with relaxation of the sphincters, which are rendered painless to dilation.

The anal dilatator (CAD33) was introduced after manual reduction of the prolapsed of the anoderm and parts of the anal mucous. After re-

removal of the obturator, the prolapsed mucous fell into the lumen of the anal dilator. Then, a 2/0 prolene endoanal purse-string suture was placed circumferentially 3-4 cm above the dentate line encompassing mucosa and submucosa through the window of the anoscope (PSA33). The hemorrhoidal circular stapler (HCS33 model PPH-01 or PPH-03) was introduced through the anus, the purse-string suture tied down onto the shaft of the instrument. The instrument was closed and fired thus incorporating the mucosal tissue in the pursestring within the head of the gun. The circular knife excised the redundant tissue and the anastomosis was accomplished by a row of titanium staples. The instrument was kept closed for ten seconds to help achieve hemostasis. The staple line was inspected and, when necessary, additional hemostatic suture with 3/0 monocryl was performed.

An endoanal spongostan plug with Foley (22-24F) was maintained in thoughtlessly traction for 4 h post-surgery. The use of Foley like a drainage tube was not peremptory and most of the surgeons performing stapled haemorrhoidopexy didn't use it: we used it only to check a possible early bleeding.

Postoperative analgesia consisted of a disposable device for infusion analgesia (infusor) of the duration of 24 hours contains ketorolac tromethamine (Toradol), and ranitidine. Antibiotic prophylaxis was not done routinely.

All the patients were discharged from hospital at 18:00 of the same day of the surgery.

After 24 hours, in the first postoperative day, the infusor was removed by the patients at home and then the patients might take, if necessary, a Nimesulide gradual decreasing dose for some days to avoid the possible but not always present, postoperative pain. If necessary, intramuscular or oral Toradol was administered during hospital stay or suggested at home as rescue analgesia.

Analgesia was definitively suspended on the forth to fifth postoperative day, or when the patient referred absence of pain.

Results

In this study were included a total of 203 patients, (80 females and 123 males) with a median age of 44 years (21-68 years), with symptomatic hemorrhoids selected and operated by the same operator for stapled haemorrhoidopexy.

Symptomatic second-degree was present in 48 cases (23.64%), third-degree in 121 cases (59.60%) and fourth-degree in 34 cases (16.74%).

Preponderant preoperative symptoms were prolapse in 61 patients (30%), anal bleeding in 142 patients (70%), recurrent thrombosis in 81 patients (40%).

Mean operative time was 26 minutes (16 to 48 minutes).

Four patients (1.97%), two of them operated with the PPH01 and other two with the PPH03, have had an anal bleeding in the day of surgery within 3 hours from the surgery. All of them were returned in the operating theatre where the hemorrhage has been stopped with additional hemostatic suture with 3/0 monocryl. Four patients (1.97%), two of them operated with the PPH01 and two with the PPH03, have had an anal bleeding at home during the night of the same day of the surgery. In the emergency room of the hospital all of them were visited and kept under observation then discharged in the same night without any intervention. One patient (0.49%) have had anal pain at home during the night of the same day of the surgery. In the emergency room of the hospital was visited and kept under observation then discharged in the same night after an administration of Ketorolac tromethamine.

There were no cases of anal stenosis, permanent incontinence in this caseload.

Discussion

This study confirms that stapled haemorrhoidopexy is associated with less postoperative pain and shorter postoperative symptoms or complications. The technical component of the operation is codified and is feasible with local anesthesia, with very little sedation in a day care setting.

Stapled haemorrhoidopexy in day surgery may be a viable addition to the therapy for rectal prolapse with advantages of early discharge for the patients and lower costs than a longer hospitalizations.

With the reduction of postoperative pain, surgery of the rectal prolapse with this method has become more acceptable as an ambulatory procedure.

In conclusion, considering that the most frequent complications, represented by anal bleeding, occur in most cases in the first few hours af-

ter surgery, we demonstrate that with PPH, performed in a single day, we are successful provide a value-added service to patients with less cost and without significant compromise on safety and efficacy.

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