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STAPLER HEMORRHOIDECTOMY: A PRELIMINARY REPORT ON EL MINIA EXPERIENCE.

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Background: *Stapled hemorroidectomy is a new promising procedure in the surgical management of anorectal hemorrhoids. It seems to jump over the classic operative procedures by being much less painful.*

Methods: *We operated upon 42 patients with 3rd and 4th degrees of hemorrhoids using the stapled technique described by Longo 1998. We reported the operative procedure, the difficulties if any, and the operative time. Postoperatively, we assessed the patients for pain, bleeding, discharges and incontinence.*

Results: *In our series, no intraoperative difficulties or complications were encountered. Postoperatively, single dose of intramuscular sodium diclofenac was enough in all patients. No postoperative bleeding or incontinence was reported. Two cases reported to complain of soilage with mucoid discharge for few days that cessated spontaneously by the 10th day postoperatively. Constipation was practiced by 38% of the patients but was easily managed by the oral intake of Lactulose. Two patients developed mild bleeding per rectum which stopped spontaneously during the first week. Only one of our patients developed retention of urine. All patients received oral metronidazole postoperatively.*

Conclusion: *Stapled hemorroidectomy seems to be a very promising tool in managing such painful and annoying disease. Its postoperative sequences are very acceptable by the patients and so as its results for the surgeon. It greatly minimizes the postoperative disability experienced after the classic operative treatment of the hemorrhoids.*

Key words: *hemorrhoids, stapled hemorroidectomy*

INTRODUCTION

Pain, bleeding, protrusion, soilage and itching are the most disturbing complaints for patients with piles [1].

Over time, a continuous search for the best treatment of these symptoms led to a great variety of different therapeutic options. Surgical hemorroidectomy is currently the most popular treatment for patients with third and fourth degree hemorrhoids. Many different techniques of hemorroidectomy have emerged through the centuries. None of them, however, became accepted as the gold standard [2].

The main surgical principles comprise eliminating the prolapsing vascular cushions alone or with relocation of the squamous epithelium, thus reconstructing the anal canal. Milligan et al. described the currently most popular open procedure eliminating the vascular cushions in 1937[3].

Stapled hemorroidectomy has received much recent enthusiasm as a novel technique in the surgical treatment of prolapsed hemorrhoids [4, 5].

In 1997, Pescatori et al. had reported on the transanal introduction of a circular stapling instrument to excise redundant rectal mucosa. [6]

Since then Longo, 1998 has refined the technique of stapling hemorroidectomy. The basis of his work was that

stapling interruption of the feeding arteries (superior hemorroidal artery branches) above the base of the hemorrhoids is adequate to complete control hemorroidal symptoms. Also stapled anastomosis draws the prolapsed anorectal mucosa upwards to be fixed in place. On the other hand residual external hemorroidal skin tags are expected to shrink or become asymptomatic. [7]

The predominant shinning feature of this stapled technique is the absence of any painful perianal wounds so it gains a high patient's compliance and encouragement. [8]

Aim of this study

By means of this study we are trying to evaluate this new technique with regard to its effectiveness, the patient's compliance (postoperative pain, easiness of motions, and incidence of incontinence either temporary or permanent), the techniqual feasibility, its suiting to the day-case surgery basis. We are dependent in our evaluation on the subjective recording of the symptoms by the patients.

PATIENTS AND METHODS

Our study included 42 patients with hemorroidal disease of the 3rd and 4th degrees, they are randomly selected. All patients were symptomatic: bleeding (10 patients), discharge and itching (7 patients), prolapsed mass (13 patients) and bleeding with prolapsed mass (12 patients).

All patients were assessed carefully through history taking, thorough clinical examination and meticulous anal examination manually and by using anoscope. Patients with associated fistulae or symptomatic anal fissures are excluded.

No manometeric studies were done but the tone of the anal sphincter is assessed manually during per rectal examination during rest and on squeezing.

Colonoscopy was not done routinely for all patients but only in three old patients with large prolapsed 4th degree piles, their symptoms were of short duration with history of changed bowel habits suspicious of recto-sigmoid neoplasm. It was negative in the three cases.

All patients with chronic constipation are ordered to use Lactulose orally 7 days before the operation to avoid postoperative stool retention.

All patients received an immediate postoperative single dose of intramuscular sodium diclofenac 75mg.

Operation:

All operations were performed under spinal or epidural anesthesia. The patients were kept in lithotomy position. Gentle minimal anal dilatation was needed to allow easy manipulations. We used a stapled hemorroidectomy set provided by Ethicon Company as PPH™ set (Ethicon Endosurgery®, Cincinnati, OH) which contains 33mm Hemorrhoidal Circular Stapler (HCS33), Suture Threader (ST100), Circular Anal Dilator (CAD33) and Purse-String Anoscope (PSA33) in 25 patients and a circular stapler 33m provided also by Ethicon Company in the remaining 25 cases. We did a single purse string suture using proline 2/0 two Cm above the dentate line in 46 cases while in the rest 4 cases we did double purse string which were 1 Cm apart as they had marked redundant mucosal prolapse.

The patients received a single dose of intramuscular sodium diclofenac 75mg as analgesic and constructed to take the oral tablets of the same drug on demand and to record the time, the dose received and if repeated or not. All patients were discharged from the hospital in the 2nd postoperative day after assurance that there is no bleeding or retention. All patients received oral metronidazole 250 tds for 7 days postoperatively.

Follow-up of the patients was at one week from the discharge then monthly for 6 months. Five patients were lost for follow-up after three visits.

RESULTS

All our cases were symptomatic. Ten patients complained of bleeding per rectum (23.8%), 7 patients (16.7%) were complaining of perianal itching with mucoid discharge during defecation and in the underwear, they had no bleeding, while 13 patients had prolapsed mass from the anus (31%) they had no previous history of bleeding they were all multiparous females. The rest 12 cases were complaining of bleeding with the presence of prolapsed piles (28.5%). (Table 1)

There were no intra-operative difficulties or complications in our cases. The operation time ranged from 15 to 30 minutes (average 20 min) after induction of anesthesia.

The single dose intramuscular NSAID was enough for all patients, and no patients recorded the need for further oral analgesics.

The hospital stay ranged from 12 to 24 hours (average 20 hours), there were no longer stay than 24 hours and this encouraged the day-case basis of such stapled maneuver.

There were 16 patients (38%) complained of postoperative constipation, which resolved by oral intake

of Lactulose. Two patients (4.8%) reported postoperative soilage with staining of the underwear; they received no more specific treatment and were stopped spontaneously by the 10th day postoperatively. Two patients (4.8%) complained of mild bleeding during the first 7 days, but it was mild and stopped spontaneously. Only one patient (2.4%) developed postoperative retention of urine treated by catheterization with a Nelaton catheter 16 fr. The patient voided normally after that.

There was no reported recurrence during the whole follow-up period, but we think that we are still in need for further longer follow-up to give more accurate comment on recurrence after stapled hemorroidectomy.

There were no reported cases of incontinence or stenosis in our series.

Table (1): ***Presentation of the patients***

Symptoms	*No*	*%*
Bleeding	10	23.8
Discharge & itching	7	16.7
Prolapsed mass	13	31
Bleeding & prolapsed mass	12	28.5

Table (2): ***Degree of hemorrhoids at presentation***

	No	*%*
3rd degree	37	88
4th degree	5	12

Table (3): ***Types and incidence of postoperative complications***

%	*No*	*Postoperative complications*
4.8	2	Postoperative soilage
38	16	Postoperative constipation
2.4	1	Retention of urine
4.8	2	Postoperative bleeding
-	-	Incontinence
-	-	Recurrence

DISCUSSION

Hemorroidectomy has the reputation, among physicians and patients alike, of being a painful procedure. This reputation in combination with the high prevalence of hemorroidal disease has generated much interest in less painful, less invasive maneuvers. [5]

Longo and colleagues have advocated the use of a circular stapler technique in the treatment of prolapsed hemorrhoids. [7] They said that the technique results in reduction of the mucosal prolapse, thereby restoring the normal anatomical relationship between the anal mucosa and submucous cushions with the anal sphincters. This, with the interruption of the superior hemorroidal artery, is suggested to be the mechanism through which stapled hemorroidectomy works. Because the procedure does not involve any surgery on the sensate anal mucosa below the dentate line, it is supposed to be less painful than traditional hemorroidectomy.

In our study, all the patients were operated upon the same basis. The results actually were very encouraging. Postoperative pain which is the main drawback of the conventional techniques was minimal with minimal soilage postoperatively that allowed all patients to engage in their

normal life within few days. This is explained by the absence of the raw surface that causes pain with soiling. Cautious application of the purse string suture in the submucosa (to avoid the sphincteric elements) with meticulous application of the stapler device (to avoid perianal skin) usually ensures safe procedure with minimal sphincteric injury (with minimal postoperative incontinence).

As regard the effectiveness of the procedure in relieving symptoms of the hemorrhoids, it seems to be effective in almost all patients. Bleeding usually stops immediate postoperative due to the interruption of the superior hemorroidal territories with tight aligned stapled mucosal edges.

Recurrence seems to be minimal but this is in need for longer follow-up to be proved.

Cost seems to be the most immediate point against this approach because the stapler (Ethicon TM dedicated kit) costs about 2000 Egyptian pounds. This is agreed with the opinion of other authors. [8,9]

Our results agree with the lastly published data of many authors. Roveran et al. 1998 collected 20 cases without complications and a visual pain scale ranging between 1 and 4 (mean, 2.5; 0–10 maximum) in the early postoperative phase. All patients were discharged after one day and followed up at one week, one month, and three months; just two patients experienced traces of blood during defecation after one month. [10] Gravié, in 1999 reported similar encouraging data. [11]

Rowsell et al. 2000 and Mehigan et al. 2000 have compared this stapling technique with the classic Milligan and Morgan technique. They found that in the stapled technique mean hospital stay, overall postoperative pain, and return to normal activities were significantly reduced [4, 5].

Conclusion:

Stapled circumferential mucosectomy is a safe and easily applicable procedure in almost all patients with 3rd, and 4th degrees of piles. It is proved to be more physiological maintaining the anatomy of the anal canal doesn't disturb the sphincteric complex of the anus and relocate the prolapsing submucous vascular cushions. It doesn't necessitate a long learning schedule. It suits the daily case basis in treating hemorrhoids. Overall, it largely satisfies the patients as its postoperative pain is much less than the traditional procedures either open or closed hemorroidectomy.

We recommend usage of this stapled maneuver in advanced hemorrhoidal disease with the minimal use of postoperative analgesics.

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