Stapled Haemorrhoidectomy: a New Technique in Lithuania

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The aim of the study was to evaluate our first results in stapled haemorrhoidectomy at the Colorectal Unit of the Department of Surgery of Vilnius Center University Hospital.

Patients and methods. Eleven patients (8 women and 3 men, age range 34 to 75 years, mean 57 years) underwent stapled haemorrhoidectomy in December 2001 to May 2002. Nine patients were operated on for III° and 2 patients for IV° haemorrhoids. Operating time ranged from 15 to 30 min, on an average 20 min. All patients were followed up at the hospital, after one week and after 2 months.

Results. Follow-up included interview, inspection and digital examination in all cases.

The mean in hospital stay was 5 days (range, 2 to 8 days), mean postoperative stay was 2 days (range, 1 to 4 days). All patients returned to their daily activity within one week and were pain-free. There were no postoperative complications. Only 5 (45.5%) out of 11 patients required analgesics during the first 24 hours after operation.

After two months all patients were satisfied with the results of surgery, evaluating them as very good. All but one patient were completely symptom-free.

Conclusion. In our experience, stapled haemorrhoidectomy was a safe and effective treatment modality for III° and IV° haemorrhoids and related with minimal postoperative pain.

Key words: anus, haemorrhoids, surgical treatment, staplers, results

INTRODUCTION

Haemorrhoids are kown by mankind since very early days. The terms derives from the Greek words 'haima' meaning blood and 'rhoos' meaning to flow. It is not exactly correct in linguistic understanding, as some of the patients suffering from haemorhoids never complain of bleeding. Today W. H. F Thomson's (1) theory of the etiopathogenesis of haemorrhoids is generally acceped. According to it, within the anal canal highly specialized vascular cushions are present, consisting of discrete masses of thick submucosa and containing blood vessels, smooth muscle, elastic and connective tissue. The Teitz ligament prevents this tissue from sliding downwards, but irregular bowel habit, hard, bulky stools and straining may cause its disruption, resulting in prolapse, bleeding or thrombosis of haemorrhoidal tissue.

The modalities of the treatment of haemorrhoids range from conservative methods, minimally invasive options to open surgery. Conservative methods include a number of suppositories and creams, which as a rule contain steroids and local anesthetics, stool softeners, lubricants and some systemic agents. Minimally invasive measures consist of sclerotherapy, rubber band ligation, infra-red coagulation, cryotherapy and few others. The standard surgical options are (in the order of decretion): circular haemorrhoidectomy (Whitehead) (2), excision and suture haemorrhoidectomy (Mitchell) (3), excision and ligation haemorrhoidectmy (Milligan–Morgan) (4), submucosal haemorrhoidectomy (Parks) (5), closed haemorrhoidectomy (Ferguson) (6) and its modifications. Milligan–Morgan haemorrhoidectomy has been the most popular operation over the years. Various options of the reduction of postoperatie pain, such as the use of local or systemic analgesics (7, 8), antibiotics (9), addition of lateral sphincterotomy to haemorrhoidectomy (10) or stretching of the anal sphincters have yielded unsatisfactory results, because the main unsolved problem is that the sensitive anal region is severely traumatized during opera-

tion. Altogether, surgery for haemorrhoids over the years has gained a reputation of a painful procedure. Thus, a search for a painless operation for haemorrhoids has occupied energy of many surgeons. In the last decade of the twentieth century two new comparatively painless modalities have been introduced: stapled haemorrhoidectomy (Longo) (11) and haemorrhoidal artery ligation using doppler sonoscopy (Morinaga) (12).

The aim of the study was to evaluate our first results in stapled haemorrhoidectomy at the Colorectal Unit of the Department of Surgery of Vilnius Center University Hospital.

To our best knowledge, this is the first published report on stapled haemorrhoidectomy in Lithuania.

PATIENTS AND METHODS

Eleven patients (8 women and 3 men, age range 34 to 75 years, mean 57 years) underwent stapled haemorrhoidectomy in December 2001 to May 2002. Nine patients were operated on for III° and 2 patients for IV° haemorrhoids.

Bowel preparation included bowel washout a day prior to surgery (Fortrans); no antibiotic prophylaxis was routinely used. Operation has been performed with a patient in a lithotomy position, under general or epidural aneasthesia. Haemorrhoidectomy was preformed using a PPH set (procedure for prolapsed haemorrhoids, Ethicon, Johnson and Johnson). This consisted of a circular anal dilator (37 mm external diameter), pursestring anoscope, suture threader and a 33 mm haemorrhoidal circular stapler. The circular anal dilator was gently inserted into the anus and secured with sutures to the skin. Its obturator was removed and replaced by a pursestring anoscope. The gap in the anoscope was rotated around the anus for aplication of a 2.0 polypropylene purse-string suture. This stitch included submucosal bites 4 cm above the dentate line. The anoscope was removed and the open haemorrhoidal circular stapler was inserted so that the distal anvil was beyond the purse-string suture. The purse-string suture was firmly tied. After firing the stapler, the jaws were kept closed for 2 minutes for haemostasis. Then they were opened, and the whole stapler line was inspected using the anoscope for possible bleeding sources. Mucosal anastomosis was created approximately 2 cm above the dentate line. Before the operation was completed, a haemostatic sponge (Spongostan) was placed in the anal canal.

The operating time ranged from 10 to 30 minutes, on an average 20 minutes.

After operation the patients were advised to take stool softeners for one week.

All patients were followed at the hospital, after one week and after 2 months.

RESULTS

The follow-up included an interview, inspection and digital examination in all cases.

The mean hospital stay was 5 days (range, 2 to 8 days), mean postoperative stay was 2 days (range, 1 to 4 days). All patients returned to their daily activity within one week and were pain-free.

There were no postoperative complications. Five (45.5%) out of 11 patients received analgesics during the first 24 hours after operation. In no instance the use of analgesics was required for a longer period.

There were no abnormalities at the suture line detected by digital examination at any of the periods.

After two months all patients were satisfied with the results of surgery, evaluating them as very good. All but one patient were completely symptom-free. The latter patient (a 66-year-old woman with III° haemorrhoids) mentioned a remaining prolapse of haemorrhoidal tissue at the right lateral localization, but as her main complaint prior to surgery was bleeding which disappeared, she evaluated the result of surgery as very good, too.

DISCUSSION

Comparing the stapled haemorrhoidectomy with open haemorrhoidectomy techniques, it should be noted that their aims are different: stapled haemorrhoidectomy removes the prolapse, improves venous drainage and thus congestion of the anal cushions and reduces bleeding; the open technique removes haemorrhoids themselves to resolve the symptoms of prolapse and bleeding. Despite the fact that stapled haemorrhoidectomy has very widely spread since it has been proposed prior to any objective materials on its advantages have been published, the long-term results of this procedure are still unknown. The oponents of this new technique usually refer to some complications which are unlikely to happen after other surgical haemorrhoidectomies: life-threatening pelvic sepsis (13), persistent postoperative pain (14), rectovaginal fistula. However, the first two could as well be judged as anecdotal reports, as they have not been reconfirmed by other authors. Lesion to vagina could be totally avoided by insert-

ing the finger into the vagina prior to firing the stapling device. Apart from criticism or support, there are the objectives that have been already demonstrated. Reduced postoperative pain, shorter hospital stay and earlier return to work or daily activites are the main part of these objectives. As a rule, stapled haemorrhoidectomy is compared with Milligan–-Morgan haemorrhoidectomy. Mehigan and coauthors reported less postoperative pain and earlier return to work in a stapled haemorrhoidectomy group; in-hospital stay was similar (15). Rowsell et al. demonstrated a significantly less pain, earlier return to work and shorter hospital stay in a stapled haemorrhoidectomy group (16). Concerning these two studies, they have received a lot of criticism due to a low number of patients recruited and a lack of functional and manometric evaluation. Ganio et a. involved 100 consecutive patients with III° and IV° haemorrhoids, included clinical and manometric evaluation and found reduced postoperative pain and shorter hospital stay as well; a trend towards earlier return to work was noted (17). Shalaby and Desoky (18), with 200 patients randomized for the two above-mentioned procedures, noted a significantly reduced postoperative pain and less complications in the stapled group. Altomare et al. tried to approach stapled haemorrhoidectomy from the functional point of view, and included 20 patients with III° haemorrhoids for anorectal manometry, rectoanal inhibitory reflex testing and three-dimensional transanal ultrasonography prior and 6 months after surgery (19). This study demonstrated that anal sphincters are not permanently damaged by these techniques. Sphincter morphology, function, high pressure zone length and rectoanal inhibitory reflex remained unchainged. In a sudy of Ho YH et al. pre- and postoperative continence scoring, anorectal manometry and endoanal ultrasonography were peformed (20). This study, with 58 patients invloved and randomized, aimed to evaluate a possible damage of the use of the anal dilator during operation; even though the risk of anal sphincter injury increased, there was no functionally singnificant difference.

CONCLUSION

In our experience, stapled haemorrhoidectomy was a safe and effective treatment modality for III° and IV° haemorrhoids and was related with minimal postoperative pain.

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HEMOROIDEKTOMIJA MECHANINIU ŽARNOS SIUVIMO APARATU – NAUJA METODIKA LIETUVOJE

S a n t r a u k a

Mūsų darbo tikslas buvo įvertinti pirmuosius hemoroidektomijos mechaniniu žarnos siuvimo aparatu rezulatus koloproktologiniame Vilniaus universitetinės centro ligoninės chirurgijos skyriaus poskyryje.

Medžiaga ir metodai. 2001 12–2002 05 laikotarpiu 11 pacientų buvo atlikta hemorojaus operacija mechaniniu žarnos siuvimo aparatu. Pacientai – 8 moterys ir 3 vyrai, amžius nuo 34 iki 75 metų, vidurkis – 57 metai. Devyni pacientai sirgo III laipsnio ir 2 – IV laipsnio hemorojumi. Operacijos truko nuo 15 iki 30 minučių, vidutiniškai – 20 minučių. Visi pacientai buvo stebimi stacionare savaitę; pakartotinė apžiūra – praėjus dviem mėnesiams po operacijos.

Rezultatai. Ligonių stebėjimą sudarė pokalbis, apžiūra bei digitalinis tyrimas. Vidutinė hospitalizacijos trukmė buvo 5 paros (nuo 2 iki 8), o vidutinė hospitalizacijos trukmė po operacijos – 2 paros (nuo 1 iki 4). Po operacijos visi pacientai per savaitę grįžo prie įprastinės gyvenimo veiklos. Komplikacijų nebuvo. Tik 5 (45,5%) iš 11 pacientų buvo reikalingi analgetikai pirmą pooperacinę parą.

Po dviejų mėnesių visi pacientai buvo patenkinti operacijos rezultatu ir operaciją įvertino puikiai. Visiems, išskyrus vieną pacientą, simptomai visiškai išnyko.

Išvada. Hemorojaus operacija mechaniniu žarnos siuvimo aparatu buvo saugi ir efektyvi gydant III ir IV laipsnio hemorojų; jis sukėlė palyginti nedidelį pooperacinį skausmą.

Raktažodžiai: išangė, hemorojus, mechaninis žarnų siuvimo aparatas, chirurginis gydymas, rezultatai