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Research Article

Hemorrhoidectomy with Local Anesthesia: Experience of the Petrona Villegas De Cordero Interzonal Acute Hospital - San Fernando

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Received: March 31, 2022; **Published:** April 22, 2022

Abstract

Introduction: Hemorrhoidectomy is the gold standard for the treatment of Grade III and IV hemorrhoids in those patients in whom medical treatment and changes in eating habits, hygiene and cessation of toxic substances are insufficient.

Objectives: To describe the experience of the Coloproctology Service of the Hospital Petrona Villegas de Cordero - San Fernando in performing hemorrhoidectomy with local anesthesia in the period between April 1, 2018 and March 30, 2019.

Materials and Methods: Through a retrospective descriptive analysis on a prospective database, surgical technique, complications and degree of satisfaction of 34 patients who underwent hemorrhoidectomy under local anesthesia are described. Those patients with Grade III and IV hemorrhoids limited to a single hemorrhoidal bundle are included. Those patients in whom another anus orifical pathology coexists, grade IV hemorrhoids of more than one bundle and those who present circumferential hemorrhoidal prolapse are excluded from the analysis. The surgical technique implemented was semi-closed in all cases.

Results: Of the 34 patients in the series, 82.35% were women and 17.65% men between 30 and 49 years old. 58.82% had Grade III hemorrhoids and 41.18% Grade IV hemorrhoids limited to a single hemorrhoidal bundle. 5.8% (n = 2) of the patients in the series presented complications, with 1 being an early complication and 1 being a late one. Regarding the degree of satisfaction, 94.11% of the patients in the series reported being between Grade I and II.

Conclusion: Hemorrhoidectomy by semi-closed technique with local anesthesia is a safe and effective procedure for the resolution of hemorrhoidal pathology, reducing hospital stay times, without modifying the standards of the technique when performed with spinal anesthesia, being able to enter into protocol of Ambulatory surgery.

Keywords: *Hemorrhoidectomy; Grade III and IV Hemorrhoids*

Introduction

Proctology has come to occupy an important part of the surgical activity in the General Surgery services of most institutions, both in the private and public spheres. Ambulatory surgery has contributed significantly to changing therapeutics when dealing with different pathologies, reducing hospitalization costs and allowing the patient to return to work promptly.

The definition of hemorrhoidal disease, its etiology and its treatment are extremely dynamic concepts, which have changed continuously in recent times.

Hemorrhoidal pathology is extremely frequent, but its prevalence is unknown precisely since patients do not consult until they have an advanced pathology. Its resolution is important due to the disorders it generates in all areas of the patient, both personal, work and social.

Depending on the degree of hemorrhoids, different treatments are implemented. It begins with medical recommendations: changes in eating habits, incorporation of physical activity into daily life, cessation of toxic habits such as smoking and alcoholism. Those patients who do not resolve with medical treatment are candidates for surgical treatment.

The ideal hemorrhoidal resection technique should allow the resection of all diseased tissue, offer the patient minimal postoperative pain, and be free of recurrence. Currently there is no technique that can offer these three premises, the biggest problem being postoperative pain management. Treatment is characterized by multiplicity and diversity. Among the most used techniques are the open Milligan-Morgan hemorrhoidectomy and the closed Fergusson technique.

Pathophysiology

The traditional concept of hemorrhoidal disease as "venous dilations" located in the anal canal has been very difficult to change, despite multiple studies that have shown how wrong the concept is. Hemorrhoids are normal anatomical structures (vascular cushions) present from the embryonic stage. They are located in the right anterior, right posterior, and left lateral quadrants of the anal canal. They present an intimate relationship in the discrimination of the different sensations that occur in the lower rectum and the anus, such as the fact of being able to discriminate if the content of the rectal ampulla is solid, liquid or gaseous, so arbitrary resection of hemorrhoidal cushions leads to loss of this function.

There is currently a consensus that hemorrhoids progress from a normal anatomical structure to a complete disease. The term "hemorrhoidal disease" implies the involvement of one or both plexuses and the rich symptomatology that accompanies it presupposes that different anorectal structures are taken (hemorrhoidal plexus, arteriovenous anastomoses, sphincter apparatus, submucosa and lining mucosa) [1].

Internal hemorrhoids are normal structures of the body and are located in the submucosa, anchored to the mucosa of the anal canal and the internal sphincter of the anus by connective and muscular fibers from the longitudinal layer of the rectum. Hemorrhoids are also fixed by a complex system of smooth and striated fibers that are extensions, in the anal canal, of the longitudinal layer of the rectum, levator ani and pelvic aponeurosis. Parks' ligament or mucosal suspensory firmly attaches the mucosa to the sphincter. External hemorrhoids are veins covered by the anoderm, less extensible than the mucosa, there are usually no muscle fascicles between them and the collagen and elastic tissue is rather scarce, so they undergo a process of distension rather than elongation and prolapse; the orifical distribution follows the location of the internal ones quite similarly, often tending to become circumferential in advanced periods of the disease. Until the work of Thomson and Haas [2] there were two theories to explain hemorrhoidal disease:

a) Mechanical theory: Displacement of the hemorrhoidal plexus due to the progressive degeneration of the muscular and fibroelastic tissue of the support means of the mucosa and submucosa of the anal canal.

b) Hemodynamic theory: Structural alterations of the internal hemorrhoidal plexus due to reflux and stasis caused by increased intra-abdominal pressure.

Classification

Hemorrhoids are classified as external, located below the dentate line, covered by anoderm and with squamous epithelium, and internal, above the pectineal line, covered by rectal mucosa and with transitional and columnar epithelium. These in turn, according to the degree of hemorrhoidal prolapse, can be classified into:

- Grade I: They protrude only into the light of the anal canal.
- Grade II: They protrude outside the anal canal during defecation, but reduce spontaneously.
- Grade III: They protrude outside the anal canal during defecation, but require manual maneuvers for their reduction.
- Grade IV: They remain prolapsed outside the anal canal and are irreducible.

Mixed hemorrhoids are defined as those that clinically and anatomically combine elements of the external and internal groups. The plicomas are not related to the hemorrhoidal vessels, although they are present in the perianal region.

Symptoms

The symptomatology of hemorrhoidal pathology is similar to that of many benign and malignant perianal pathologies, so many patients may arrive late to the consultation with other types of pathologies due to erroneously attributing the symptoms to hemorrhoidal disease. Clinically, hemorrhoidal disease is characterized by:

- Proctorrhagia: Red, bright, painless bleeding that occurs at the end of defecation.
- Prolapse or increase in volume: Produces a sensation of a foreign body inside the anal canal, with a sensation of tenesmus. It can be associated with a mass that protrudes through the anus at the end of defecation.
- Secretion: Frequently associated with grade III and IV hemorrhoidal disease, product of the secretion produced by the mucosa of the prolapse that accompanies this pathology.
- Pruritus: Secondary to the secretion produced by the mucosal prolapse.
- Pain: When present, it is associated with complications such as hemorrhoidal thrombosis or other pathologies such as anal fissure, perianal abscesses, papillitis, or anal or rectal carcinoma [3,4].

Complications

As for the complications of hemorrhoidal disease, there are:

- Thrombosis: It is due to the obstruction of the circulation of the external hemorrhoids in the intersphincteric curve, associated with the thrombosis of the macro and microcirculation of the external hemorrhoidal veins. It is characterized by the presence of pain.

- Strangulated hemorrhoids: Present in prolapsed hemorrhoidal disease, which becomes inflamed secondarily due to decreased blood flow due to severe spasm of the sphincter and is associated with severe pain.

Physical exam

Physical examination: It must be systematically carried out in the first consultation in the following order: Inspection, Digital rectal examination, Anoscopy and Rectosigmoidoscopy. In those older than 50 years of age, a complete evaluation of the colon should be performed at that time even when hemorrhoids were the obvious cause of bleeding [5]. The need for a complete proctological examination for differential diagnosis should be emphasized, since it has been found that 7% of patients with asymptomatic hemorrhoids had colonic or rectal carcinoma; The same warning should be given to those patients with undiagnosed chronic anemia and bleeding hemorrhoids, about the need to investigate the existence of a carcinoma of the right colon.

Surgical treatment

Goligher that "good results can be obtained from a number of different methods of hemorrhoidectomies and in the choice of technique the surgeon will undoubtedly be influenced by his personal experience".

Over time, innumerable techniques have been described for the resolution of hemorrhoidal pathology, however, none is considered the gold standard.

The main objective of hemorrhoidectomy is to reduce the local vascularization by ligation of the three branches of the superior rectal artery and completely remove the hemorrhoidal tissue, keeping the functions of defecation and anal continence intact. Currently, the most frequently used surgical techniques are the open pedunculated hemorrhoidectomy of Milligan and Morgan, the semi-open pedunculated hemorrhoidectomy of Parks, and the closed pedunculated hemorrhoidectomy of Fergusson. Classically, hemorrhoidectomy is a procedure that is performed on the patient with spinal anesthesia, with postoperative urinary retention being a frequent complication, as described in other series, so performing the procedure with local anesthesia and neuroleptanalgesia would prevent the patient from interfering with it. postoperative event.

Milligan and Morgan open pedicled hemorrhoidectomy

It was described in 1937. The patient is placed in the lithotomy position, with the legs flexed. two assistants facilitate the correct exposure of the anal canal.

In the first time, 3 sets of tweezers are placed. the first three Kocher forceps are placed at the anal margin or at the apex of the outgrowths at 3, 8, and 11 o'clock. The second set, in the same position, is placed above the first tweezers on the pectineal line. After infiltrating the subpectineal part of each pack with lidocaine + 1% epinephrine, the 3 Kelly clamps are fixed, above and in the previous one, on the rectal mucosa, allowing, by exerting a slight traction, to perform the triangle of exposure constituted by the externalized rectal mucosa.

The second time consists of the separate dissection and ligation of the three individualized packages, at 3h, then 8h and finally 11h. This dissection, carried out with Mayo scissors, must respect certain guidelines:

- Making a triangulocutaneous, with an internal vertex delimited by the second forceps, and release of the skin flap by cutting the fibers that originate in the complex longitudinal layer.
- Individualization of the lower border of the internal sphincter, release of the same, ideally by sliding between the thumb and the index finger with a compress and section of the Parks ligament.

- Carefully hemostasis of the wound particularly in the intersphincteric space.

Ligation is performed with absorbable thread mounted on a curved needle. (vicryl 0 or 1) said ligature must pass from side to side sinking the needle flush with the internal sphincter to make it come out again at the height of the tip of the Kelly clamp, on both sides of the tip of the latter a double knot is made, the knots are then slid into the forceps, taking care not to get them caught in the ligature. During this procedure the two strands of the ligature must be held under tension to ensure that there is no narrowing, the operator repeatedly passes the index finger into the anal canal.

The third stage consists of the release and denudation and even shortening of the bridges that must be handled with caution due to the risk of secondary necrosis.

The release of the bridges is carried out by insinuating between these and the lower edge of the sphincters, the two blades of the scissors. Its objective is twofold:

1. Promote stripping and reversal of skin bridges using Chaput-Mayo forceps to remove underlying residual hemorrhoids
2. Allow these bridges to stretch at the end of surgery during reintegration of the ligated residual limbs.

A fourth time associates the section of each bundle, leaving a mucosal stump of approximately 5 mm and verifying the absence of hemorrhage in the cut. Approximately 10-mm ligature threads are left in place to serve as landmarks in the event of reoperation for postoperative bleeding. the stumps are reintegrated into the anal canal with antiseptic-impregnated compresses and hemostasis is verified. mucocutaneous wounds are left open. After the intervention, a compressive dressing is placed.

Technical variants

Modified Milligan and Morgan intervention

Before the classic removal of the three hemorrhoidal bundles, a fourth posterior rotation is performed with leiomyotomy and anoplasty with a rectal mucosal flap. The interest of this technique lies in carrying out the simultaneous removal of a posterior fissure or a fourth posterior bundle.

Milligan and Morgan intervention with partial leiomyotomy in a cut

Usually the cut of the internal sphincter is made in the cut of 3. The use of a curved needle allows a cut limited to the lower fibers of the smooth muscle. This variant can be interesting in the young man with anal hypertonus.

The results of the intervention of Milligan and Morgan are very satisfactory with less than 2% of failures.

Parks semi-open pedicled hemorrhoidectomy

This technique described by Parks in 1956 consists of submucosal hemorrhoidectomy of the three hemorrhoidal packages.

The patient is placed in the lithotomy position with the legs flexed.

After placing a Parks separator, each bundle was treated separately after placing a Kocher clamp in the skin area and infiltration with lidocaine + epinephrine.

In the package, an incision is made inside the anal canal in the shape of an inverted Y that goes up to the rectal mucosa.

The first submucosal dissection severs Parks' ligament and continues on the external face of the bundle, avoiding the internal sphincter.

High ligation of the pedicle is performed.

The reconstruction of the mucosa of the anal canal is carried out by separate points crossing the internal sphincter. the skin portion of the incision is not closed to allow drainage.

Fergusson closed pedicled hemorrhoidectomy

This intervention, popularized by Fergusson in 1959, places the patient in left lateral or ventral decubitus.

An elliptical incision is then made circumscribing the bundle. the hemorrhoidal tissue and the adjoining mucosa are attracted with a forceps, the dissection is carried out from the cutaneous part distant from the lower border of the internal sphincter to the vascular pedicle 2 cm above the pectineal line. During the dissection, the internal sphincter is respected, hemostasis is performed and the edges of the wound are slightly separated to release the adjacent hemorrhoidal remains and allow suturing without tension.

A short needle with absorbable threads is passed through the pedicle to carry out the ligation and section, the same thread is used to make a continuous suture point in the extirpation wound. this suture is first mucosal and then cutaneous.

The other packages are treated according to the same technique, obtaining the final appearance consisting of the 3 radiated scars, linear, converging towards the anal canal.

The advantages of the Fergusson intervention would be rapid healing, which reduces the time of hospitalization and care, the reduction of postoperative and incontinence.

Postoperative care of hemorrhoidectomy

After performing the hemorrhoidectomy, especially in the case of open techniques, wound care is very important as it determines the functional and aesthetic result. It is important to educate the patient in postoperative habits to avoid intercurrences. These consist of antiseptic sitz baths with separation of external wounds, application of healing ointments, and rectal exams twice daily and/or suppositories to prevent septation of wounds and the formation of strictures.

Postoperative follow-up is essential, as it ensures the proper evolution of healing. Postoperative pain, present in almost 90% of patients undergoing hemorrhoidectomy, of multifactorial origin and not associated with any particular technique, contributes to the bad reputation of surgical intervention, therefore, it is essential to alleviate it through a technique irreproachable surgery, rest from work, sitz baths, systematic administration of analgesics, laxatives and even anxiolytics.

Complications of hemorrhoidectomy

The reduction of the complications of the procedure has been the objective of the development of new techniques and some modifications of the classic techniques. The most frequently cited complications with classical techniques are postoperative hemorrhage, perianal edema, anal incontinence, urinary retention, and anal stenosis [6,7].

There are several forms of treatment, with surgical hemorrhoidectomy being the most used, not because it is the best, but because of the advanced degree of hemorrhoidal development that patients present during the consultation [8-11].

Target

To describe our experience, the complications and the degree of satisfaction with hemorrhoidectomy with local anesthesia.

Materials and Methods

Descriptive, retrospective analysis was performed on a prospectively loaded database. The variables studied were sex, age, haemorrhoidal grade, complications and degree of satisfaction. Regarding complications, these are divided into early (from the immediate postoperative period to 7 days after surgery), mediate (from postoperative day 8 to 30 days) and late (after 30 days after surgery).

All patients with grade III and IV hemorrhoids limited to a single hemorrhoidal bundle, evaluated at the Outpatient Coloproctology Clinic of the "Petrona Villegas de Cordero" General Interzonal Acute Hospital in San Fernando, Buenos Aires, Argentina, were included in this study. anamnesis, physical examination and rectosigmoidoscopy were performed, and they underwent hemorrhoidectomy with local anesthesia, in the period between April 1, 2018 and March 30, 2019. Follow-up was carried out at 7, 15, 30 and 90 days later. to surgery.

Long-term follow-up was carried out by means of an online survey sent to the email address of the operated patients 6 months after surgery to assess the degree of satisfaction according to the Visik scale performed by the co-authors, but avoiding the acting surgeon to avoid bias in the job:

I. Asymptomatic

II. Mild symptoms that do not affect quality of life

III. Moderate symptoms that do not affect quality of life but require medication

IV. Symptoms that affect quality of life as in the preoperative period.

Excluded from the analysis of this work are those patients in whom another anoorificial pathology coexists, grade IV hemorrhoids of more than one bundle and those who present circumferential hemorrhoidal prolapse.

Surgical technique

The patients underwent rectoanal preparation with a low-pressure evacuating enema 12 hours prior to surgery and a liquid diet 24 hours prior to the procedure; Antibiotic prophylaxis with metronidazole 500 mg every 8 hours starting 72 hours before surgery. Patient in lithotomy position. Using neuroleptanalgesia combined with local anesthesia (bupivacaine 0.25% and lidocaine 1%) with pudendal nerve block. The technique chosen in all patients was a semi-closed combination, including the usual times of high ligation of the hemorrhoidal pedicle with polygalactin 3/0, excision and monopolar electrofulguration of the hemorrhoidal bundle, resecting the external and internal components, performing partial closure of the resection edges. with continuous 3/0 polygalactin suture, ending the procedure with the placement of a hemostatic gauze plug with solid Vaseline with a safety rope for extraction.

Postoperative

The patients in our series started oral tolerance 3 hours after the procedure was finished. The analgesia used in the postoperative period was 150 mg of diclofenac diluted in 500 ml of physiological solution in continuous drip at 21 ml/h, associated with rescues with diluted morphine 0.2 mg in case of pain according to the WHO analgesic scale from 0 to 10 greater than 5.

Registration and follow-up

The mean hospital stay of all patients in the series was 7.36 hours, with a range between 6 and 8 hours of hospitalization.

Indications for discharge are described below:

- 1st postoperative day: Local moist heat and relative rest
- Diet rich in fibers plus liquids
- Vaseline liquid one tablespoon at night
- Post defecation perianal hygiene
- Hot sitz bath (BAC) from the 2nd postoperative day every 6 - 8 hours
- Diclofenac 50 mg orally every 8 hours
- Acetaminophen 325 mg + Tramadol hydrochloride 37.5 mg (Zaldiar®) up to 3 tablets/day only if there is pain
- Control of pain scale by online survey to be completed by the patient for 72 hours.

Results

Included in this work are 34 patients operated on during the period between April 1, 2018 and March 30, 2019, 28 patients (82.35%) were women and 6 patients (17.65%) were men. The age range is between 30 and 49 years, with a mean of 39.26 years and a median of 39 years, respectively. Of the patients in our series, 58.82% (n = 20) of the patients had Grade III hemorrhoids and 41.18% (n = 14) Grade IV hemorrhoids limited to a single hemorrhoidal bundle. The hospital stay of all the patients in the series was from 6 to 8 hours, with a mean of 7.36 hours. 5.88% of the patients (n = 2) presented complications: 1 mild proctorrhagia without immediate hemodynamic decompensation and a late complication in which the patient intercurred soiling that was resolved months after surgery.

Regarding the degree of satisfaction according to the Visik scale, 27 patients (79.42%) reported being in Grade I, 5 patients (14.70%) Grade II, 1 patient (2.94%) Grade III and 1 patient (2.94%) Grade IV.

Conclusion

Hemorrhoidectomy by semi-closed technique with local anesthesia is a safe and effective procedure for the resolution of hemorrhoidal pathology, reducing hospital stay times, without modifying the standards of the technique when performed with spinal anesthesia, being able to enter the outpatient surgery protocol.

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Volume 9 Issue 5 May 2022