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Is the severe pain after Milligan-Morgan hemorrhoidectomy still currently remaining a major postoperative problem despite being one of the oldest surgical techniques described? A case series of 117 consecutive patients

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ABSTRACT

INTRODUCTION: Surgery is the only curative method of hemorrhoidal disease. Currently the Milligan-Morgan hemorrhoidectomy is still considered the "gold standard", since it is the best performing technique. However, postoperative pain remains a major problem. We analize the postoperative analgesic requirements for this procedure in 117 patients.

PRESENTATION OF CASES: Between 2012 and 2013, 117 consecutive patients undergoing Milligan-Morgan hemorroidectomy, with an analysis of sex, age, total vascular anal cushions removed, hospital stay, complications, and relation with postoperative analgesic requirements. Patients with documented allergy to NSAIDs or pyrazolones were excluded. Additionally 23 patients undergoing Milligan-Morgan hemorrhoidectomy associated to internal lateral sphincterotomy were also analyzed.

RESULTS: The mean age of patients was 51.7 years. The 50.8% were women and 49.2% men. In 33.3% of cases, one vascular anal cushion was removed, 2 in 39.3%, and 3 in 27.4%. The average stay for the 3 groups was 2.0 days. An analgesic dose average of 4.1 by day was given, with opioid requirements in 22.2% of cases. It was statistically significant that as more anal cushions were eliminated was higher the opioids need. No significant difference of opioids use was found regarding patients undergoing sphincterotomy as additional procedure.

DISCUSSION: Postoperative pain after a Milligan-Morgan hemorrhoidectomy currently remains a problem for colorectal surgery teams. This involves the use of opioids comparable to other major surgeries, finally causing not negligible days of admission charge. A protocolized analgesic treatment, as we actually do in our center, should be implemented after a Milligan-Morgan hemorrhoidectomy for improving the postoperative period pain management.

1. Introduction

Hemorrhoidal disease has been common in all mankind ages. Hippocrates, Galen, Maimonides and others, addressed the issue and they proposed several medications and resources for treatment [1]. The estimated prevalence of this disease is 5–36% depending on the series, being more prevalent in Western countries. Is known that at least, 50% of people over 50 year old have symptoms related to this disease at some point of their life [2]. While most remain asymptomatic and other people will get well with the conservative medical treatment, the 5–10% of patients will require a surgical treatment.

Surgical treatment is the only truly curative method of hemorrhoidal disease. This is indicated in patients to whom conservative measures have failed and for those who have developed complications. Of the several surgical techniques, the Milligan-Morgan hemorrhoidectomy is still considered the "gold standard" treatment of this disease, since it is the most radical one and it has the best results [3].

However, the big problem remains the postoperative pain. This aspect has been analyzed in several studies, as the hemorrhoidectomy is a procedure in which the severe pain (opioid requirements in analgesic management) occurs in 20–40% of patients [4–6], even

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more than the "older" abdominal surgeries. While they have been tested different strategies to improve pain, there is no absolute recommendation so far.

2. Presentation of cases

In this study, it is analyzed the postoperative analgesic requirements for Milligan–Morgan hemorrhoidectomy procedure in our Hospital.

We retrospectively reviewed in the period of 2012–2013, about hemorrhoid pathology surgical treatment, from the computerized database of the Vic University Hospital. There were selected for analysis only patients undergoing Milligan-Morgan hemorrhoidectomy that is the technique most frequently performed at our center. Hemorrhoidectomies with a sphincterotomy as procedure associated were also analyzed.

The data was processed with statistical analysis software SPSS version 21.

The procedure was performed under epidural anesthesia and patient positioned with legs supports. It was performed, following the technique of the hemorrhoidectomy described by Milligan-Morgan, packets disection using electrocautery and the transfixion ligature of the pedicle using resorbable material suture (polyglycolic acid). In any case, no other pre- or post-hemorrhoidectomy strategy for pain control was added. In some cases a lateral internal sphincterotomy was added. Postoperative analgesia consisted of a protocolized and computerized pattern of our Pharmacy Department, including Dexketoprofen 50 mg intravenous every 8 h, alternating with Metamizole 2 g (the latter administered according to patient need), so that every 4 h the patient may receive a dose of an analgesic. Pethidine 50 mg subcutaneous every 6 h was used as rescue medication. At 48 h after surgery the analgesic treatment is changed to an oral medication pattern with Ibuprofen 600 mg every 8 h alternating with Metamizole 575 mg, and Tramadol 50 mg every 8 h as rescue dose. All doses administered during the hospital stay were recorded electronically. We excluded patients with documented allergy to NSAIDs or pyrazolones.

3. Results

The performed surgeries were a total of 183 hemorrhoidectomies following Milligan-Morgan technique, during the period 2012–2013 in the Vic University Hospital. Of these, 127 underwent only to the hemorrhoidal excision, 27 patients had associated an internal lateral sphincterotomy, and the remaining 29 cases, underwent some other extra method (excision of skin tag, fistulectomy or fistulotomy) and were excluded for the analysis.

Among patients undergoing hemorrhoidectomy Milligan-Morgan as a single procedure, only 10 were operated under a MAS regimen (major ambulatory surgery with removal of 1 package in 8 cases and the remaining two cases with removal of 2 and 3 packages). The rest 117 patients underwent surgery in hospital admission with protocolised analgesic regimen described above.

57 cases of hospitalized patients were men and 60 were women with an average age of 50′8 years (CI 0.95: 48′4–53′3). The number of packages removed was 1 packet in 38 patients (32′5%), 2 packages in 46 patients (39.3%) and 3 packages in 33 patients (28.2%). The average hospital stay overall was 2.0 days (25th percentile = 1, 75th percentile = 2), slightly lower (1.8 days) for patients undergoing removal of a single package, respect to removal of 2 and 3 hemorrhoidal packages (2.1 days on average for both groups). No significant differences were observed between number of hemorrhoidal packages removed and hospital stay. There were two episodes of acute urinary retention, and one patient required a reintervention for postoperative bleeding that was manifested on the eighth day after surgery.

On the other hand, the analgesic doses supplied were around an average of 4.4 doses/day (25th percentile = 4, 75th = 5). A total of 26 patients required the use of opioids as rescue analgesia, representing 22.2% of operated. Depending on the number of packages removed the middle analgesic doses were 4.0 doses/day for those who underwent removal of a hemorrhoidal package and 4.6 doses/day for those who underwent removal of 2 or 3 packets. Regarding the use of opiates, 22.2% of patients needed; 15.4% required in case of one hemorrhoidal package removal, 42.3% in the case of two packets, and 42.3% if 3 packets were excised. There is no relationship between the total hemorrhoidal packages removed and the using of opiates ($p > 0.05$). It is important to notice that the 26 patients requiring opioids as analgesic rescue, the 69′2% required just one dose. The rest ranged from 2 to 9 doses during admission. Finally one patient was provided with a Patient Controlled Analgesia method of Tramadol plus NSAIDs for 24 h for uncontrollable pain.

As additional data, we analyzed patients underwent to internal lateral sphincterotomy associated with hemorrhoidectomy procedure separately.

In the same period they were operated 27 patients, of which 4 were under AMS regimen. The average age of the 23 who were hospitalized was 52.3 years (CI 0.95: 44.8–59.8). They were 8 men and 15 women. Admitted patients had an average stay of 1.7 days (1.3 for one package extirpated and 2-day for two and 3 packages). The mean analgesic dose/day was 4.1 (3.9 for one package, 4.1 for two and 5.5 for 3 packages – just one patient-).

Of those who needed opioid analgesia rescue we had a total of six patients (26′1%). Of these, two (20%) after a removal of one package and four (33%) after removal of two hemorrhoidal packages.

4. Discussion

The postoperative pain control is still being a topical issue in the management of anal canal pathology, especially regarding to hemorrhoidal disease treatment. In addition to the – oral or intravenous- analgesic systemic administration, different strategies have been proposed as adjuvants for pain control, remaining better symptom control, shorter hospital stay and overall greater patient satisfaction.

Several strategies have been proposed: acupuncture [7], creams or gels with several agents (nitrites, anesthetics, calcium antagonists, sucralfate, metronidazole, salsobromoiodic, cholestyramine) for topical application [8–15], nonsteroidal anti-inflammatory suppositories [11], local infiltration with botulinum toxin [16], or local anesthetic agents [5,6,17] or even ambulatory PCA (patient controlled analgesia) pumps [18].

The technique described by Milligan and Morgan in 1937, with few variations of the original procedure, still provides the best outcomes in hemorrhoidal disease treatment. The stapled or Longo's technical mucosectomy has achieved better results in terms of postoperative pain control, but has been shown inferior in terms of healing and recurrence and it is not applicable to all types of patients.

There are other techniques currently under study, such as pedicle ligation of hemorrhoidal guided by ultrasound, that haven't demonstrated comparable efficacy to the "open" hemorrhoidectomy yet. The use of ultrasonic sealing devices vascular demonstrate also improves as to postoperative pain, but the cost added by the use of this technology makes it less attractive for wider use.

We decided to present the analgesic requirements in surgical practice of the Milligan-Morgan hemorrhoidectomy in a general

hospital, which so far has not implemented any of the above strategies, and in which the surgery is performed with a conventional style without surgical devices or specific anesthetic practice (pararectal infiltration, pudendal block, elastomeric pumps).

While we don't have the record of pain scale levels in the reviewed period and with all the limitations of a retrospective analysis, the analgesic needs in general (opiates analgesic in particular) give us an idea of the pain problem after the surgery for this condition. Moreover, although they are not comparable samples, the association of internal lateral sphincterotomy with the hemorrhoidectomy, also bring great benefits in terms of improving postoperative pain as reflected in our records, although the benefits of its use continues being controversial [19,20].

5. Conclusion

Postoperative pain after Milligan-Morgan hemorrhoidectomy remains a reality in our center, where it is practiced routinely, without analgesic specific strategies. It involves a considerable number of days of hospitalization and a high rate of opiates use, comparable to other abdominal major surgeries as reported by the literature.

In this sense we are proposing a new strategy for better control of post-hemorrhoidectomy pain, waiting to implement the medium-term outpatient treatment for this surgery with rational and judicious use of health and human resources.

We consider an important fact the several efforts made in different centers from diverse perspectives and disciplines involved in the intervention – anesthesiology and surgery-for better management of postoperative pain.

However, in the light of current knowledge, no strategy seems provide postoperative pain control after an hemorrhoidectomy, in terms of effectiveness, efficiency and comfort for patient and health team, so is necessary to continue seeking alternatives to act in this regard.

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