Original Article

Towards 'Zero' Postoperative Pain following Common Anal Operations by Effective Anesthesia and Non-opioid Multimodal Analgesia

Boonnithi W, MD[1], Lohsiriwat V, MD, PhD[1]

[1] Colorectal Surgery Unit, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Objective: This study aimed to assess the safety and effectiveness of perianal block and total intravenous anesthesia (TIVA) together with a non-opioid multimodal analgesia for common anal operations and to compare their results between outpatient setting and inpatient setting.

Materials and Methods: This prospective study included 83 elective anal operations performed under perianal block and propofol-based TIVA between September 2016 and August 2017. Non-opioid analgesics include NSAIDs or selective COX-2 inhibitor, and paracetamol. Surgical outcomes were determined and compared between outpatient and inpatient surgery.

Results: This study included 42 inpatients and 41 outpatients-with average age of 44 years. Anal fistulotomy was the most common operation performed (n = 39, 47%) followed by hemorrhoidectomy (n = 33, 40%). No patient required additional anesthetic method to control pain during an operation. None experienced postoperative nausea and vomiting. Two patients (2.4%) had urinary retention requiring single catheterization. Average numerical pain scale (ranging 0 to 10) at rest and during defecation was 2.3±1.5 and 2.6±1.6 on the day of surgery, 2.3±1.3 and 2.6±1.3 on postoperative day (POD) 1, and markedly decreased to 0.1±0.3 and 0.1±0.3 on POD 7. Inpatient group had a non-significant lower pain score than outpatient group. There was no 30-day reoperation or readmission.

Conclusion: Perianal block and propofol-based TIVA, together with opioid-sparing multimodal analgesia, were associated with effective intra-operative pain control, mild postoperative pain and a low incidence of acute urinary retention following anal operations in both outpatient and inpatient setting.

Keywords: Perianal block, Total intravenous anesthesia, Multimodal analgesia, Anal surgery, Hemorrhoidectomy, Fistulotomy, Outpatient, Inpatient, Surgery, Pain

J Med Assoc Thai 2020;103(Suppl.5): 103-8
Website: http://www.jmatonline.com

According to the 2015 practice guideline of the American Society of Colon and Rectal surgeons, various anorectal operations including hemorrhoidectomy and fistulectomy can be safely and cost-effectively performed in an ambulatory setting[1]. In our institute, many patients underwent ambulatory anorectal surgery under the infiltration of local anesthetic agents into the perianal area by surgeons[2,3]. In 2007, we analyzed 222 anorectal procedures performed under this perianal anesthetic infiltration or so-called 'perianal block' with good clinical outcomes and neither intravenous analgesics nor conversion to general anesthesia was required during surgery[3]. However, about 4% of the patients experienced intraoperative vasovagal reaction due to anorectal manipulation or breakthrough pain.

Correspondence to:

Lohsiriwat V.

Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, 2 Wang Luang Road, Bangkok 10700, Thailand.

Phone: +66-2-4198005, **Fax:** +66-2-4121370

E-mail: bolloon@hotmail.com

Since then, total intravenous anesthesia (TIVA) along with perianal block was introduced into our daily practice for anorectal surgery aiming to minimizing patient discomfort and optimizing pain control during an operation. Moreover, a standardized regimen for postoperative pain control was used including warm sitz bath and the administration of non-opioid analgesics e.g. paracetamol and selective cyclooxygenase (COX) -2 inhibitor. However, the effectiveness of this practice is not full studied. Therefore, the aims of this study were to assess the safety and effectiveness of perianal block and total intravenous anesthesia (TIVA) together with non-opioid regimen for pain control in anal surgery and to compare their results between outpatient setting and inpatient setting.

Materials and Methods

Patients

After obtaining an ethical approval from the Siriraj Institutional Review Board, a prospective study was conducted in adult patients (age ≥18 years) undergoing anal surgery from September 2016 to August 2017 at the

How to cite this article: Boonnithi W, Lohsiriwat V. Towards 'Zero' Postoperative Pain following Common Anal Operations by Effective Anesthesia and Non-opioid Multimodal Analgesia. J Med Assoc Thai 2020;103(Suppl.5): 103-8.

Department of Surgery, Faculty of Medicine Siriraj Hospital, Thailand. Patient scheduled for an elective operation for hemorrhoids, anal fistula, chronic anal fissure and chronic anorectal abscess under perianal block and TIVA were asked to participate this study. Patients were excluded from this study if having a history of allergy or hypersensitivity to local anesthetic agents, being pregnant, and taking anticoagulants or antiplatelet drugs. There were no additional investigations done unless specifically indicated by patient's medical history and physical examination. After receiving a standardized pre-operative counselling, patients voluntarily opted for outpatient surgery or inpatient surgery. For inpatient surgery, patients were hospitalized one day prior to surgery and discharged in the next day after surgery. For outpatient surgery, patients came to the hospital in the morning of scheduled surgery, had an operation in that morning and were discharged at 3 to 4 hours after surgery providing that they had minimal pain and were clinically stable as well as able to void spontaneously. Intravenous administration of prophylactic antibiotics was given in an operation for anal fistula or abscess. There was no mechanical bowel preparation or enema used. Written informed consent was obtained from every patient. The present study was approved by the Siriraj Institutional Review Board (699/2560(EC1)).

Preventive analgesia and intraoperative anesthesia

Patients were not allowed to eat or drink 6 hours prior to surgery *except* having 2 tablet of acetaminophen 500 mg and, if no contraindication, 1 tablet of selective cyclooxygenase-2 inhibitor (celecoxib 400 mg or etoricoxib 90 mg) at 2 to 3 hours before an operation. After a patient was lying in a prone jackknife position on an operating table, propofol-based TIVA was given by a staff anesthesiologist. Propofol 2.0 to 2.5 mg/kg was administered intravenously and anesthesia was maintained with propofol 5 to 10 mg/kg/hour via a perfusion pump. Oxygen was applied at a flow rate of 3 to 4 L/min via a nasal cannula. Vital sign and adequate respiration were continuously monitored. During an operation, perianal block was performed by a surgeon using a 30 to 40 mL mixed aliquot of 0.5% bupivacaine hydrochloride and 1% lidocaine hydrochloride with adrenaline 1: 10,000. The 20 to 30 mL aliquot was infiltrated through a 25G needle into the left and right anterolateral aspects of the perianal region-about 1 cm from the anal verge. Directions of the injection were parallel to the lower portion of the anal canal, ischioanal space and perineal body[2]. The remaining anesthetic solution (10 mL) was infiltrated beneath internal hemorrhoids-or around fistulous tract or abscess cavity before performing surgery.

Operative procedures

All operations were performed by a board-certified colorectal surgeon. Hemorrhoids were treated by semi-closed hemorrhoidectomy using a vascular sealing device or diathermy. Wound edges on the anorectal mucosa were approximated with interrupted absorbable sutures-but wound at the perianal skin was left opened to prevent anal stricture and severe pain. No hemostatic sponge was inserted into the anal canal. Anal fistula was treated with either lay-open fistulotomy or ligation of intersphincteric fistula tract (LIFT). Chronic anal fissure was managed by lateral internal anal sphincterotomy (closed technique). For chronic anorectal abscess, a cruciate incision was made over the lesion and gauze drains were placed in the abscess cavity to ensure an adequate drainage.

Postoperative pain control

Standardized regimen for postoperative pain control included acetaminophen 500 mg (2 tablet oral every 6 hours for the first three days, then 1 tablet as needed every 4 to 6 hours), selective COX-2 inhibitor (celecoxib 400 mg or etoricoxib 90 mg daily for 5 to 7 days)-if no contraindication such as ischemic heart disease, cerebrovascular disease and chronic kidney disease, fiber supplement with/without oral laxatives before bedtime, and warm sitz bath twice daily. Details of anesthetic and analgesic protocol for anal surgery are summarized in Table 1.

Outcome measurement and data collection

In order to determine the safety and effectiveness of perianal block and TIVA together with non-opioid-based pain control regimen for anal surgery, the primary outcome measures included the need of additional 'rescue' intra-operative anesthesia (e.g. the administration of intravenous analgesics or conversion to general anesthesia), anesthesia-related adverse events, postoperative pain score at rest and during defecation (numeric rating scale or NRS of 0 to 10 where 0 means no pain at all and 10 means the worst pain), and surgical outcomes. Questionnaires evaluating postoperative pain were filled up by the patients. A 5-point Likert scale was used to measure overall satisfaction of patients (1 = not at all satisfied to 5 = completely satisfied). All patients were scheduled to follow-up at 1 week and 1 month postoperatively.

Sample size calculation

In order to compare the outcomes of this anesthetic and analgesic technique in outpatient and inpatient setting, we used a level of postoperative pain as a comparative outcome. We hypothesized that there was no difference in pain score between the two settings[4]. Thirty-seven patients per group were required to give 80 percent power at 5 percent significance level to detect a difference in mean numerical rating pain score (NRS 0 to 10) with a standard deviation of 1.7. After estimating the possible 15% of incomplete data or patients lost to follow-up, we targeted the sample size of 45 patients per group.

Statistical analysis

Data were prepared and compiled using the Statistical Package for the Social Sciences program version 18.0 for Windows (SPSS Inc, Chicago, IL). Continuous variables were expressed as mean $\pm$ standard deviation and

were compared using the Student t-test or Mann-Whitney U test. Categorical data were expressed as number (percentage) and were compared using the Pearson Chi-square test or Fisher exact probability test. A *p*-value of <0.05 was considered statistically significant.

Results

Ninety patients were enrolled in this study but only 83 patients (92%) completed the questionnaires. Of them, 48 (58%) were males with average age of 43.7±14.4 years. The procedures were 39 fistulotomy (47%), 33 hemorrhodiectomy (40%), 5 lateral internal sphincterotomy for chronic anal fissure (6%), 4 ligation of intersphincteric fistula tract (5%) and 2 drainage for chronic anorectal abscess (3%). Patients' characteristics and details of procedures were comparable between outpatients and inpatients (Table 2). None of the patients needed a conversion to general anesthesia or other 'rescue' anesthetic techniques during surgery. None experienced neither vagovagal reaction nor anesthesia-related adverse effects during an operation.

In the recovery room, average score of immediate postoperative pain was 0.9±1.4 with a slightly higher pain score in outpatients than that in inpatients (1.3±1.6 vs. 0.6±0.9; $p = 0.017$). Average postoperative pain score at rest on the evening of surgery was 2.3±1.5 and gradually reduced day by day to 0.1±0.3 on postoperative day (POD) 7. The low pain intensity and decreasing pain pattern were also observed for pain during defecation – average pain score of 2.6 on POD 0 to 1 to pain score of 0.1 on POD 6 to 7 (Figure 1). The average level of postoperative pain in the first weeks after an operation was slightly lower in the inpatient group. Overall satisfaction score of inpatients was

Table 1. Anesthetic and analgesic protocol for anal surgery

Preoperative
Structured preoperative counseling to patients and their relatives
Nothing by month 6 hours before a scheduled operation except 2 tablet of acetaminophen 500 mg and 1 tablet of selective cyclooxygenase-2 inhibitor (if no contraindication) at 2 to 3 hours before an operation
Empty bladder before entering an operating theater
Intraoperative
Administration of propofol-based total intravenous anesthesia after patient is on prone jackknife position
Oxygen supplement via a nasal cannula
Perianal block with a 30 to 40 mL mixed aliquot of 0.5% bupivacaine hydrochloride and 1% lidocaine hydrochloride with adrenaline 1: 10,000
No anal packing after an operation
Postoperative
Restriction of total volume of intravenous fluid (not more than 1L)
2 tablet of acetaminophen 500 mg every 6 hours for the first three days, then 1 tablet as needed every 4 to 6 hours
1 tablet of selective COX-2 inhibitor (if no contraindication) daily for 5 to 7 days
Other: fiber supplement with/without oral laxatives before bedtime, warm sitz bath twice daily and after every bowel movement

Table 2. Patients' characteristics and operative details

	Total (n = 83)	OPD (n = 41)	IPD (n = 42)	*p*-value
Age	43.7±14.4	42.8±15.0	44.6±13.9	0.586
Male	48 (58)	24 (59)	24 (57)	1.000
Weight (kg)	64.9±13.8	64.4±12.8	65.5±14.8	0.739
Height (cm)	165.5±8.9	164.8±9.7	166.5±8.1	0.445
Co-morbidity				0.340
Hypertension	10 (12)	5 (12)	5 (12)	
Diabetes mellitus	4 (5)	3 (7)	2 (5)	
Dyslipidemia	3 (4)	0 (0)	3 (7)	
Selective COX-2 inhibitor given	46 (55)	19 (46)	27 (64)	0.124
Type of operation				0.012
Fistulotomy	39 (47)	22 (54)	17 (41)	
Hemorrhoidectomy	33 (40)	13 (32)	20 (48)	
LIFT	4 (5)	1 (3)	3 (7)	
Lateral internal sphincterotomy	5 (6)	5 (12)	0	
Incision and drainage	2 (2)	0	2 (5)	

COX = cyclooxygenase, LIFT = ligation of intersphincteric fistula tract

significantly higher than that of outpatients (Table 3).

Most patients were able to void at the average time of 3.1±1.3 hours postoperatively. Seventy-eight patients (94%) could void without difficulty. Dysuria on the first day was noted in 3 patients (3.6%) and 2 (2.4%) required single catheterization for acute urinary retention. Urinary problems resolved within one week in all of the five patients. All outpatients needed no hospitalization after surgery. None of the patients required re-operation or re-admission within 30-day after surgery.

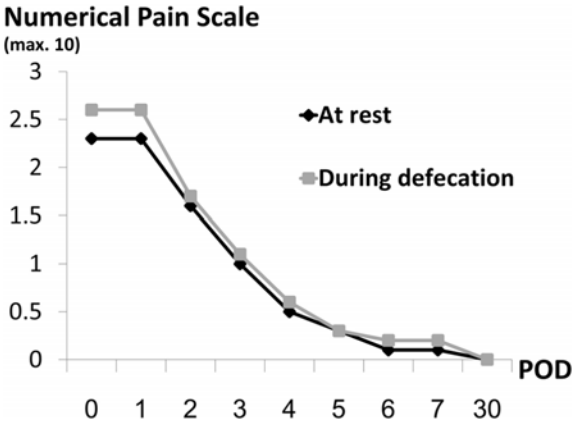

Figure 1. Postoperative pain at rest and during defecation from the day of surgery to postoperative day (POD) 7 and 30.

Discussion

This study demonstrates that a variety of anorectal procedures for hemorrhoids, anal fistula, anal fissure and anorectal abscess can be performed safely and effectively under perianal block and TIVA. Together with an effective regimen of non-opioid-based perioperative analgesia, pain at rest and during defecation after anorectal operation was minimal and close to zero after 1 week in both ambulatory and inpatient setting. The incidence of postoperative dysuria or urinary retention was also low with this anesthetic and analgesic approach. Although this study showed a slightly lower pain intensity and higher overall satisfaction score in inpatients, there is no clinical significance between ambulatory surgery and inpatient surgery. These findings support the statement in the 2015 practice guideline of the American

Table 3. Surgical outcomes

	Total (n = 83)	OPD (n = 41)	IPD (n = 42)	*p*-value
Immediate pain (in a recovery room)	0.9±1.4	1.3±1.6	0.6±0.9	0.017*
Pain at rest				
Day 0	2.3±1.5	2.3±1.8	2.3±1.2	0.868
Day 1	2.3±1.3	2.6±1.5	1.9±1.0	0.013*
Day 2	1.6±1.2	2.0±1.4	1.2±0.8	0.004*
Day 3	1.0±1.0	1.2±1.3	0.8±0.7	0.093
Day 4	0.5±0.9	0.6±1.1	0.4±0.5	0.154
Day 5	0.3±0.7	0.4±0.9	0.2±0.4	0.078
Day 6	0.1±0.5	0.3±0.7	0	0.014*
Day 7	0.1±0.3	0.2±0.4	0	0.018*
At 1 month	0	0	0	n/a
Pain during defecation				
Day 0	2.6±1.6	2.5±1.8	2.6±1.4	0.867
Day 1	2.6±1.3	2.9±1.5	2.2±1.1	0.019*
Day 2	1.7±0.9	2.1±1.5	1.4±0.9	0.016*
Day 3	1.1±1.1	1.3±1.3	0.9±0.8	0.101
Day 4	0.6±0.9	0.7±1.2	0.5±0.7	0.281
Day 5	0.3±0.7	0.4±0.9	0.2±0.4	0.107
Day 6	0.2±0.5	0.2±0.7	0	0.023*
Day 7	0.1±0.3	0.1±0.4	0	0.032*
At 1 month	0	0	0	n/a
Overall satisfactory				
During surgery	4.5±0.5	4.4±0.6	4.6±0.5	0.035*
Day 1	4.6±0.6	4.4±0.7	4.8±0.5	0.015*
Day 7	4.8±0.4	4.7±0.5	4.9±0.2	0.006*
At 1 month	4.9±0.3	4.9±0.4	5.0±0.0	0.103
Time to first void (hour)	3.1±1.3	3.1±1.2	3.1±1.3	0.941
Voiding problem				1.000
Dysuria	3 (3.6)	1 (2.4%)	2 (4.7%)	
Urine retention	2 (2.4)	1 (2.4%)	1 (2.4%)	

* The *p*-value <0.05

Society of Colon and Rectal surgeons[1] – in which ambulatory surgery is a safe and cost-effective approach to many anorectal procedures providing that patients received proper and effective anesthesia and analgesia as shown in our study.

Perianal block is a simple technique of infiltration of local anesthetic solution into the perianal region. The types of local anesthetic drugs and details of solution infiltration may be different[5,6]. In this series, we used a combined aliquot of short-acting lidocaine with 1: 10,000 adrenaline and long-acting bupivacaine because 1) lidocaine provides initial pain relief and surgeon can perform an operation straightway, 2) the mixture of adrenaline minimizes the systemic absorption of local anesthesia and may decrease intraoperative blood loss due to its vasoconstrictor effect, and 3) bupivacaine provides pain relief up to 4 to 6 hours postoperatively. We appreciated that perianal block alone may cause pain especially at the time of local anesthetic infiltration and pain associated with injection had an adverse effect on patient satisfaction. Therefore, we always started TIVA before anesthetic infiltration. This explanation was supported by the study of Park et al-in which 41 patients undergoing anal surgery under perianal block was evaluated and found only 63% of the patients with a high satisfaction. The difference between those with high satisfaction and those without was pain during perianal block[7]. Hence, perianal block along with propofol-based TIVA could further improve patient satisfaction than perianal block alone because of better pain control and more relaxation of patients during surgery.

Regarding the efficacy or effectiveness of perianal block with TIVA, several studies have favorable results of this technique over other interventions. For example, Li and coworkers conducted a randomized clinical trial comparing 3 anesthetic approaches to ambulatory anorectal surgery: perianal block with TIVA, spinal anesthesia and general anesthesia. They found that there was no significant difference among the three groups in term of safety and effectiveness. However, perianal block with TIVA had the shortest times to oral intake and home-readiness and its cost was lower than the others by 30 to 50%[8]. A more recent randomized clinical trial examining perianal block with TIVA and spinal block for hemorrhoidectomy found that perianal block with TIVA had faster onset of anesthesia, longer pain-free period, earlier time to ambulation and comparable pain during injection. As a result, patients receiving perianal block with TIVA had more satisfaction score than those undergoing spinal block[9]. Perianal block with TIVA also had a shorter recovery time and allowed patients to go home quicker than spinal anesthesia[10] and general anesthesia[11].

It is well known that pain is one of the most common causes of delayed discharge after ambulatory surgery[12]. Compared with our previous study in 2007 in which early postoperative pain was minimal[3], postoperative pain score in the present study was even lower from the day after surgery (about 2.3 to 2.6 out of 10) to POD7 (0.1 out of 10) during bowel movement or at rest. Notably, no patients in ambulatory setting in both studies had to be admitted or re-admitted. The better pain control in our current series could be explained by an improvement in perioperative multimodal analgesia with paracetamol and selective COX-2 inhibitor-together with better intra-operative TIVA. Now we aimed towards 'zero' postoperative pain because our series essentially showed that average postoperative pain score remained in a mild degree (less than 3 out of 10). Pain score was only 1 on POD 3 and closed to zero on POD7.

There was a slightly lower level of postoperative pain and a higher level of satisfaction score in the inpatient group. A possible explanation is that inpatients did not have to travel back to their houses so that they could have less movement-related pain. Moreover, hospitalization - even in short period of time could ensure their wellbeing and allow some time off work thus making inpatient had a higher score of satisfaction.

Compared with our previous study of 222 ambulatory anorectal operations in which the rate of urinary retention requiring catheterization was 0.5%[3], the present study had a higher rate (2.4%) of acute urinary retention. This may be, in part, a result from intra-operative administration of intravenous fluid for TIVA. Nevertheless, the incidence of acute urinary retention after anorectal surgery in our institute was remarkably low. Our protocol to minimize the risk of postoperative urinary retention includes advising a patient to empty the bladder just before surgery, limiting amount of perioperative intravenous fluid, and utilizing effective multimodal analgesia-preferably non-opioid-based regimen. It was evident that perioperative fluid restriction to less than 1,000 ml significantly decreased the incidence of urinary retention from 16.7% to 7.9% and effective postoperative pain control reduced the incidence of urinary retention from 25.6% to 7.9%[13].

Although this study demonstrated that perianal block and TIVA together with opioid-sparing multimodal analgesia were associated with effective intra-operative and postoperative pain control as well as a high satisfaction score in both outpatient setting and inpatient anorectal surgery, some limitations of this study needed to be addressed. First, perianal block with TIVA might not be suitable for some complex anal surgery (e.g. complex anal fistula involving supralevator space or gluteal area) because of the limited field of anesthesia where it is located to or within the anal canal. Second, perianal block with TIVA may be inappropriate for patients with difficult airway because it is a challenge to maintain airway of such patients in a prone position. Third, non-randomization was performed between outpatient and inpatient setting thus leading to risk of bias. However, the application of well-established protocol and standardized procedure for common anal operations in both groups could cover the drawback of non-randomized study. Future studies could focus only on hemorrhoidectomy because its postoperative pain is more prevalent and severe than other types of anal surgery-with aiming to develop a procedure-specific perioperative pain regimen.

Conclusion

Anal surgery under perianal block and TIVA-

together with effective pain control is safe and feasible approach in both inpatient and outpatient setting. This anesthetic and analgesic approach was associated with good intra-operative pain control, mild postoperative pain, low urinary retention and high patient satisfaction.

What is already known on this topic?

Effective perioperative pain control and intra-operative anesthetic approach are of great importance for anal surgery. They are associated with less immediate postoperative complication particularly acute urinary retention and allow early patient discharge or even a same day surgery.

What this study adds?

This study confirms the safety and effectiveness of perianal block (local infiltration of lidocaine and bupivacaine mixture) and propofol-based total intravenous anesthesia-together with perioperative non-opioid multimodal analgesia for common anal operations including anal fistulotomy and hemorrhoidectomy in both inpatient setting and ambulatory surgery.

Potential conflicts of interest

The authors declare no conflict of interest.

References

1. Ternent CA, Fleming F, Welton ML, Buie WD, Steele S, Rafferty J. Clinical practice guideline for ambulatory anorectal surgery. Dis Colon Rectum 2015;58:915-22.
2. Lohsiriwat D, Lohsiriwat V. Outpatient hemorrhoidectomy under perianal anesthetics infiltration. J Med Assoc Thai 2005;88:1821-4.
3. Lohsiriwat V, Lohsiriwat D. Ambulatory anorectal surgery under perianal anesthetics infiltration: analysis of 222 cases. J Med Assoc Thai 2007;90:278-81.
4. Kelly AM. Does the clinically significant difference in visual analog scale pain scores vary with gender, age, or cause of pain? Acad Emerg Med 1998;5:1086-90.
5. Aphinives P. Perianal block for ambulatory hemorrhoidectomy, an easy technique for general surgeon. J Med Assoc Thai 2009;92:195-7.
6. Sobrado CW, Habr-Gama A. Hook-needle puncture. A new technique of local anesthesia for anorectal surgery. Dis Colon Rectum 1996;39:1330-1.
7. Park SJ, Choi SI, Lee SH, Lee KY. Local perianal block in anal surgery: the disadvantage of pain during injection despite high patient satisfaction. J Korean Surg Soc 2010;78:106-10.
8. Li S, Coloma M, White PF, Watcha MF, Chiu JW, Li H, et al. Comparison of the costs and recovery profiles of three anesthetic techniques for ambulatory anorectal surgery. Anesthesiology 2000;93:1225-30.
9. Jinjil K, Dwivedi D, Bhatnagar V, Ray RK, Tara S. Perianal block: Is it as good as spinal anesthesia for closed hemorrhoidectomies? Anesth Essays Res 2018;12:36-41.
10. Fleischer M, Marini CP, Statman R, Capella J, Shevde K. Local anesthesia is superior to spinal anesthesia for anorectal surgical procedures. Am Surg 1994;60:812-5.
11. Kushwaha R, Hutchings W, Davies C, Rao NG. Randomized clinical trial comparing day-care open haemorrhoidectomy under local versus general anaesthesia. Br J Surg 2008;95:555-63.
12. Pavlin DJ, Chen C, Penaloza DA, Polissar NL, Buckley FP. Pain as a factor complicating recovery and discharge after ambulatory surgery. Anesth Analg 2002;95:627-34.
13. Toyonaga T, Matsushima M, Sogawa N, Jiang SF, Matsumura N, Shimojima Y, et al. Postoperative urinary retention after surgery for benign anorectal disease: potential risk factors and strategy for prevention. Int J Colorectal Dis 2006;21:676-82.

ความปวดหลังผ่าตัดบริเวณทวารหนักใกล้เคียงศูนย์ โดยการระงับความรู้สึกและการให้ยาระงับปวดแบบผสมผสานที่มีประสิทธิภาพ

วรุตม์ บุญนิธิ, วรุตม์ โล่ห์สิริวัฒน์

วัตถุประสงค์: งานวิจัยนี้ต้องการประเมินความปลอดภัยและประสิทธิภาพของการฉีดยาชารอบทวารหนักร่วมกับการให้ยาสลบทางหลอดเลือดดำ และการให้ยาแก้ปวดที่ไม่มีอนุพันธ์ของมอร์ฟีนสำหรับการผ่าตัดโรคบริเวณทวารหนัก และต้องการเปรียบเทียบผลการรักษานี้ระหว่างการผ่าตัดผู้ป่วยนอกและผู้ป่วยใน

วัสดุและวิธีการ: งานวิจัยนี้เป็นการศึกษาแบบไปข้างหน้ารวมผู้ป่วยผ่าตัดทวารหนักจำนวน 83 ราย ผ่าตัดภายใต้วิธีการฉีดยาชารอบทวารหนักร่วมกับการให้ยาสลบทางหลอดเลือดดำตั้งแต่เดือนกันยายน พ.ศ. 2559 ถึงเดือนสิงหาคม พ.ศ. 2560 ยาแก้ปวดที่ใช้ประกอบด้วยพาราเซตตามอลและยาแก้อักเสบที่ไม่มีสเตียรอยด์ โดยวัดความปวดหลังผ่าตัดและผลลัพธ์อื่นๆ และเปรียบเทียบผลการรักษาระหว่างการผ่าตัดผู้ป่วยนอกและผู้ป่วยใน

ผลการศึกษา: งานวิจัยนี้มีผู้ป่วยนอก 41 ราย ผู้ป่วยใน 42 ราย อายุเฉลี่ย 44 ปี การผ่าตัดฝีคัณฑสูตรและการผ่าตัดริดสีดวงทวารเป็นการผ่าตัดที่ทำบ่อยที่สุด ไม่มีผู้ป่วยต้องเปลี่ยนหรือเพิ่มวิธีการระงับปวดระหว่างผ่าตัด ไม่มีผู้ป่วยที่มีอาการคลื่นไส้หรืออาเจียนหลังผ่าตัด มีผู้ป่วย 2 ราย (2.4%) ปัสสาวะไม่ออกหลังผ่าตัด ซึ่งต้องสวนปัสสาวะ ความปวดหลังผ่าตัด (0 ไม่ปวดเลย ถึง 10 ปวดมากที่สุด) ในขณะพักและเมื่อถ่ายอุจจาระเท่ากับ 2.3 และ 2.6 ตามลำดับ ในวันที่ผ่าตัดและวันแรกหลังผ่าตัด และความปวดลดลงอย่างมากจนเหลือ 0.1 ในวันที่ 7 หลังผ่าตัด ผู้ป่วยในมีระดับความปวดน้อยกว่าผู้ป่วยนอกเล็กน้อย ในงานวิจัยนี้ไม่มีผู้ป่วยต้องผ่าตัดซ้ำหรือต้องกลับเข้ามารักษาตัวในโรงพยาบาลซ้ำ

สรุป: การผ่าตัดบริเวณทวารหนักโดยการฉีดยาชารอบทวารหนักร่วมกับการให้ยาสลบทางหลอดเลือดดำ และการให้ยาแก้ปวดที่ไม่มีอนุพันธ์ของมอร์ฟีน สามารถลดอาการปวดขณะผ่าตัดได้อย่างมีประสิทธิภาพ มีอาการปวดหลังผ่าตัดลดลง และมีอุบัติการณ์ของการปัสสาวะไม่ออกหลังผ่าตัดซึ่งต้องสวนปัสสาวะน้อย ทั้งการผ่าตัดแบบผู้ป่วยในและผู้ป่วยนอก