

Inferior rectal nerve block as analgesic for haemorrhoid surgery

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الخلاصة

ان عمليات رفع البواسير بالطريقة الجراحية يصاحبها ألم شديد بعد العملية. في هذه الدراسة نبحت كفاءة وفعالية حقن العصب الذي يزود منطقة الشرج بالتخدير الموضعي لتقليل الألم بعد العملية الجراحية، حيث تم تقسيم المرضى الى مجموعتين. المجموعة الاولى تشمل مئة مريض تم حقنهم بالتخدير الموضعي والمجموعة الثانية وتشمل مئة مريض اخرين لم يتم حقنهم بالتخدير الموضعي. تم تسجيل وقت العملية وشدة الألم بعد العملية واي مضاعفات ممكن ان تحدث بعد العملية الجراحية. تم الحقن بعد اعطاء التخدير العام ثم فتره انتظار خمس دقائق وبعدها تم السماح بالجراح بأجراء العملية الجراحية، لقد وجدنا ان حقن العصب المزود للشرج هي عملية كفوة وسهلة في علاج الألم ما بعد العملية الجراحية لعمليات البواسير، تخفيف وعلاج الألم هو حق من حقوق الانسان.

Abstract

Aim : Is to evaluate the effectiveness of Inferior Rectal Nerve block (IRNB) in hemorrhoid surgery for post operative (post op) pain in the first 24 hours.

Aim:

The aim is to evaluate the effectiveness of IRNB as analgesic in haemorrhoid surgery in the first 24 hours post op.

Methods:

Efficacy of IRNB for hemorrhoid surgeries was prospectively evaluated on 200 consecutive patients over 14 months. Patients were divided into 2 groups. 100 patients received LA (Twenty ml of local anesthetic (10 ml 0.25% bupivacaine and 10 ml 1% lignocaine with adrenaline was infiltrated into the anal sphincter under GA (Group A) , and 100 patients did not receive IRNB (group B). Rescue analgesia in the form of tramadol and diclofenac was available.

Duration of analgesia; postoperative pain based on verbal response score (VAS 0-10); and complications were analyzed and recorded.

Results:

200 open haemorrhoidectomies were performed. Injection was done just after commencing GA , and 5 minutes onset time allowed before surgery started.

Operative time ranged from 10-20 minutes .

In Group B, tramadol and diclofenac were administered as rescue analgesia.

Post op pain based on VAS was assessed during the next 24hours.

Injection site hematoma (1%) was a reported complication in-group A.

Conclusions:

IRNB is effective, simple and effective analgesia in hemorrhoid surgery.

Introduction:

Post op pain is common problem following hemorrhoid surgery.

GA , is associated with high pain score (VAS 7-8) post op. To treat post op pain , tramadol and diclofenac were used. IRND found to have less pain post op (VAS 0-2) , and earlier mobilization and no side effects of nausea and vomiting .

Anatomy

The inferior rectal nerve is typically the most proximal of the three branches of the pudendal nerve (the terminal branches of the nerve being the perineal nerve and the dorsal nerve of the penis or clitoris). The inferior rectal nerve branches from the pudendal nerve as it passes forwards in the lateral wall of the ischioanal fossa. The inferior rectal nerve usually branches from the pudendal nerve within the pudendal (Alcock's) canal.

Course

After the inferior rectal nerve branches from the pudendal nerve within the pudendal canal, it arches through the fat of the ischioanal fossa and ramifies along the lateral aspect of the anal canal.

Branches

The branches of the inferior rectal nerve provide somatic cutaneous sensation to the anal canal inferior to the pectinate line and therefore this part of the anal canal is sensitive to pain, touch and temperature. Somatic efferent fibres from the inferior rectal nerve also stimulate contraction of the voluntary external sphincter.

The inferior rectal nerve may contribute to the innervation of levator ani though the pudendal nerve and the perineal branch of the pudendal nerve typically supply these muscles.

Relations

At its origin the inferior rectal nerve branches from the pudendal nerve within the pudendal canal in the lateral wall of the ischioanal fossa, also travelling within this canal are the internal pudendal artery and vein.

The lateral wall of the ischioanal fossa also houses the tuberosity of the ischium,

the obturator internus muscle and the obturator fascia (that composes the pudendal canal). Outside the pudendal canal and crossing the lateral wall of the ischioanal fossa transversely (within the ischioanal fat) are the paired inferior rectal arteries, which supply the inferior part of the anal canal as well as the surrounding muscles and perineal skin. Similarly, inferior to the pectinate line the internal rectal plexus drains into the inferior rectal veins around the margin of the external anal sphincter.

Block technique

Equipment

1. 20 ml plastic syringe.
2. 22 G (38mm) needle – sharp.
3. Gloves and antiseptic paint.

Technique

1. General anaesthesia.
2. Lithotomy position.
3. Paint and drape patient.
6. Imagine you are looking at a clock face. Take the 22 G (38mm) needle and insert it at the 3 o'clock position on the circle , 2.5 cm from midline.
7. Insert the needle to the hilt (angle it at 45° laterally) and inject 5 ml.
8. Reinsert at 12 o'clock (angled 45° north) and inject 5 ml , and again at 6 o'clock (angled 45° south) injecting 5 ml.
9. Insert the needle at 9 o'clock and inject 5 ml
10. The total amount of local anaesthetic used in this block is 20 ml.

Drugs

1. Lidocaine 2% .
2. Bupivacaine 0.5% . It is reasonable to add epinephrine 1:200,000.

Aim is that the 20 ml plastic syringe contain 10 ml lidocaine and 10 ml bupivacaine with 1/200,000 adrenaline.

Patients and methods

This study was conducted in Al-Diwaniya Teaching Hospital, Iraq.. 200 ASA physical status I and II patients of both sexes

undergoing hemorrhoid surgery were included in this study. Exclusion criteria included patient refusal, allergy to amide local anesthetic, and history of psychiatric disease

Patients were allocated randomly by a computer-generated list into two groups: the Local Anaesthesia (LA) group (A) and the non LA group (B). All patients received the same general anesthetic technique. No premedication was used. General anesthesia was induced with intravenous ketamine (2 mg/kg) and propofol (2.0-2.5 mg/kg). Anesthesia was maintained with oxygen and halothane. All patients received 4 mg dexamethasone Intravenously(IV) during surgery. Standard monitoring maintained throughout the procedure included ECG, noninvasive arterial pressure, arterial oxygen saturation.

The severity of pain was measured by visual analogue score (VAS) in the recovery room and at 2-4, 6-8, 10-12, and 18-24 h after operation and was recorded

Postoperative nausea and vomiting together with the amount of antiemetic medications received during the first 24 h were recorded. Any adverse events including bleeding, swelling, or bruising related to the technique used were also recorded

Results:

A total of 200 patients were included in this study.

There were no reported cases of bleeding, swelling, in group A. In addition, 50% of group B patients required antiemetics following tramadol administration. All patients in group B had a high pain score (7-8-VAS) post op that they required tramadol and diclofenac as rescue analgesics

Discussion

Early postoperative pain after the procedures is a frequent complaint.

GA for hemorrhoid surgery is known to be associated with postoperative pain. Pain management is a human right.

Emerging trend is towards ambulatory surgery for anorectal surgeries owing to its advantages. Local anesthetic blocks used to prevent and treat pain.

The aim of IRNB is to block the terminal nerve fibres to the anus and the sphincter to facilitate smooth and painless surgery, and for post op pain. Techniques of administering IRNB is direct infiltration into the sphincter, we chose it as it was technically easy in our experience. IRNB is largely successful (99% in our series) owing to the ease of technique.

Compared to conventional analgesia, IRNB proves effective by interfering minimally with the physiologic homeostasis. Injection site hematoma was a complication reported in 1% in-group A.

Patients

Safety; ease of technique; optimal analgesia; rapid recovery; minimal side effects; minimal necessity of post operative monitoring; adequate post op pain relief and low cost are virtues that justify adoption of IRNB as analgesia of choice for post op pain in hemorrhoid surgeries

Conclusion

IRNB block is a safe, simple, reliable, and effective mode of analgesia for hemorrhoid surgery. Its effectiveness justifies its adoption as analgesia of choice.

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