

Transversus Abdominis Plane (TAP) Block for post OP Analgesia in TAH -A case Report

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ABSTRACT

Pain during immediate post-operative period is very common as surgery involves dissection of planes and cutting of the tissue. Patients who had under gone surgery under general anaesthesia usually feel excruciating pain after recovery of anaesthesia. The same can occur in spinal anaesthesia after the subarachnoid block ceases to function. The Transversus Abdominis Plane (TAP) Block is a novel technique to alleviate the occurrence of post-operative pain. 20ml of 0.375% of Ropivacaine is given into the fascia at the level of transversus abdominis plane bilaterally to achieve the post operative pain relief in a case of total abdominal hysterectomy which has provided analgesia for 16hrs.

KEY WORDS: Post-op analgesia, transversus abdominis plane block, 0.375% ropivacaine

INTRODUCTION

Pain is a noxious sensation, usually felt by the individual and usually depends on the susceptibility of individual, time of occurrence and others. Every surgical patient will have an experience of his own post-operative pain after completion of surgery in post-operative period; usually the attending anesthesiologist will have a subtle plan to modify the pain in post-operative period. Medication for pain relief usually forms part of premedication itself. As longer acting local anesthetic, Bupivacaine is being used for subarachnoid block; the pain occurrence is delayed, the sensory block out lasts the surgery. When the surgery is prolonged even under subarachnoid block, the patient is in need of rescue analgesic in the immediate post operative period. Analgesics to control the pain are usually opioids but their usage is having their own problem like itching, respiratory depression, PONV (Post operative nausea and vomiting) and dependence.

CASE REPORT

A 38 yrs old female posted for total abdominal hysterectomy was given subarachnoid block with 0.5% Bupivacaine with 3cc at level of L3-L4 and achieved a sensory level block up to T8. The Motor block lasted for 2 hrs with sensory loss of 21/2 hrs. Surgery was uneventful with not much hemodynamic disturbances. Transversus Abdominis Plane (TAP) Block was planned for post-operative analgesia in this patient.

PROCEDURE

The Block followed the technique as described by Dr. Rafi

⁽¹⁾. The principle of Technique is to deposit sufficient quantity of local anesthetic in Petit's triangle in the planes of fascia around the transversus abdominis.

Petit's triangle was identified by following the land marks:

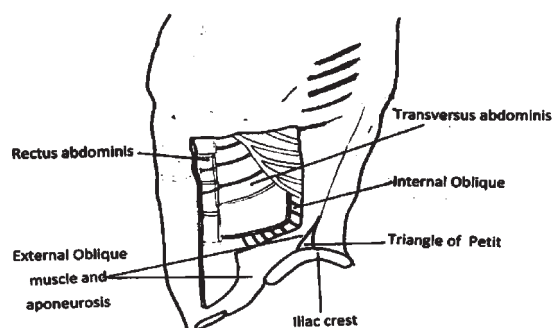


Fig 1 : Petit's Triangle

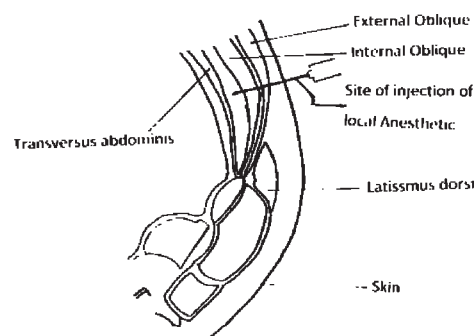


Fig 2 : Plane of Injection

The triangle is formed by free posterior border of external oblique muscle anteriorly, anterior border of latissimus dorsi posteriorly and by iliac crest inferiorly. The area of triangle is occupied superficially by fasciae of external oblique and internal oblique and transversus abdominis beneath. After the surgery, after application of sterile dressing to the wound on the operation table the patient's lateral side of abdomen was cleaned on both sides along the iliac crest and with sterile precautions and TAP block was performed .

A 50mm 22G size stimuplex A insulated nerve block needle with a 300 bevel, was used, The advantage of the needle is that the pop ups are felt easily and the same needle carries an extension of catheter so that the drug can be given easily from distance without disturbing the position and plane of needle. The skin was pierced at 2.5 cms posterior to highest point of iliac crest in the triangle that corresponds to midpoint of triangle of Petit.

The borders of the triangle are delineated by contraction of muscles as patient lifts the head and shoulder on the same side. The needle passes through skin, subcutaneous tissue and external oblique and internal oblique along with their fascial coverings. 2 pop ups are clearly experienced as the needle pierces the fascia covering the internal and external oblique. Advancement of the needle is stopped after 2nd pop up. Negative aspiration is confirmed for blood. 20ml of 0.375% Ropivacaine injected. Same procedure was repeated on other side.

RESULTS

The patient had pain free post operative period and the analgesia lasted for 16 hours. The patient never needed rescue analgesia of any kind (Opioids, Nonsteroidal antiinflammatory Drugs (NSAIDs). The complications observed were nil ⁽⁴⁾, patient had no nausea and vomiting and haemodynamically stable.

DISCUSSION

Analgesia during post-operative period is vital and an important topic of discussion and main cause for discomfort for the patient in post operative period. Hence maintenance of post-operative analgesia is very important. There are various techniques of preventing (or) reducing post-operative analgesia which include administration of intravenous opioids (or) NSAIDs (or) performing peripheral nerve blocks. The disadvantage with opioids is that there is an increased risk of PONV, itching and respiratory depression and some reactions to NSAIDs. Nerve blocks with precision are comparatively safe and good for post-operative analgesia.

TAP Block is one of the safest peripheral nerve block where analgesia can be achieved for long period. Usage of ultrasound provides more precision in location of the planes,

but if ultrasound is not available it can be performed by 2 popups technique. In this patient 2 pop ups technique was adopted at the time of completion of surgery, the motor block due to subarachnoid block was regressing and also the patient was moderately built with good exposure of anatomical land marks hence procedure was easily performed with 50mm stimuplex- A needle with 300 level and 22 G size. TAP Block can be performed in many other elective and emergency surgical procedure like exploratory laparotomy, lower segment caesarean section, acute appendicitis, infra umbilical incisional hernia and inguinal hernias ^(2,3,4). As we give injection only at a single site and area of extent of analgesia very wide i.e, from T6 to L1, analgesia covers post-operative demands. A single injection can achieve sensory block over a wide area of the abdominal wall.

CONCLUSION

In our case the analgesia extended the post-operative period for 16hours and hence it is a safe and simple alternative post-operative analgesia for lower abdominal surgeries.

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