



USG GUIDED TAP BLOCK FOR MANAGEMENT OF POST HERNIOPLASTY ANTERIOR COMPARTMENT NERVE ENTRAPMENT SYNDROME IN A 62 YEAR OLD MALE.

Anaesthesiology

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ABSTRACT

Chronic post surgical pain (CPSP) can be a distressing complication of surgery. Open inguinal hernia repair is one of the most frequent surgical interventions and is associated with upto 0.5-6% chronic pain post surgery. Anterior cutaneous nerve entrapment syndrome (ACNES) is one of the most common cause of chronic post surgical abdominal wall pain. Multiple approaches are used for managing this pain ranging from oral analgesics to minimal interventions like peripheral nerve blocks. Among nerve blocks, ultrasound guided Transversus abdominis plane block (TAP) can be used both as a modality to diagnose and treat chronic abdominal pain. We discuss a case of a 62 year old male patient presenting to the pain clinic with acute exacerbation of chronic abdominal wall pain managed with ultrasound guided TAP block.

KEYWORDS

Chronic post surgical pain, Inguinal hernia repair, Anterior cutaneous nerve entrapment syndrome, ultrasound guided Transverse abdominis plane block.

INTRODUCTION

Chronic post surgical pain (CPSP) in an updated definition was defined as Persistent post surgical pain (PPSP) as "pain persisting at least three months after surgery, that was not present before surgery, or that had different characteristics or increased intensity from preoperative pain, localized to the surgical site or a referred area, and other possible causes of the pain were excluded.¹ PPSP can be distressing for the patients leading to functional and psychological distress.

Chronic abdominal wall pain (CAWP) is one of the most common causes of chronic abdominal pain (CAP). Approximately 10-20% CAP originate from the abdominal wall itself.² The most important reason is entrapment of cutaneous nerves as the lateral border of the rectus abdominis muscle known as anterior cutaneous nerve entrapment syndrome (ACNES).³

The anterior abdominal wall is innervated by lower thoracic nerve (T₇-T₁₂) which travel in the plane between internal oblique and transversus abdominis muscle and finally enter at 90° angle to the fibrous opening at the lateral border of rectus sheath. The use of ultrasound guided Transversus abdominis plane block is hence indicated in the treatment of ACNES.

Case Report

A 62 year old male patient was referred to the pain clinic with complaint of abdominal pain for last 3 months. He was post operative case of right open mesh hernioplasty for direct inguinal hernia 5 months back. The abdominal pain started 2 months after surgery and was located 7-8 cm inferolateral to the umbilicus on the right side, dull aching, burning in nature, localized, non radiating, exacerbated while walking and bending forward. The patient rated his pain 7/10 on the Visual Analog Scale (VAS). He had been evaluated by the general surgeon and no abnormality was found on ultrasound abdomen and was on oral NSAIDs, Tab Tramadol and Tab Gabapentin with no relief. ACNES was suspected as there was pin point tenderness around lateral border of rectus and a positive carnett test (tensing the abdominal muscles by elevating the head and shoulder in prone position lead to increase in pain).

USG guided TAP block was planned after taking informed consent. Under strict asepsis, under USG guidance using high frequency linear probe, right TAP block was given by placing the probe lateral to rectus sheath where all these layers of abdominal muscles were seen. A combination of 20mg methylprednisilone and 10ml 0.125% P Bupivacaine was injected between the fascial layer of internal oblique and transverse abdominis using a 22 G echogenic needle, utilizing in-plane approach.

20 minutes after giving the injection the VAS reduced to 5/10 and 3/10 after 3 days. On a follow-up after 6 months, the patient continues to experience a similar pain relief and improved quality of life.

DISCUSSION

TAP block has conventionally been used for the management of

perioperative analgesia, however its use in chronic pain has not been extensively studied.

Diagnosing ACNES as the cause of abdominal wall pain is based on history, proper physical examination and a positive carnett test in the absence of any other intraabdominal pathology.⁴ Entrapment of cutaneous branches of sensory nerves supplying the abdominal wall result in localized pain which can be due to fibrosis, scarring and tissue edema due to surgery.⁵

Landmark guided TAP block was traditionally used, however, recently USG guided TAP block with injection of local anaesthetic and steroid in the interfascial plane can be diagnostic as well as therapeutic.

CONCLUSION

TAP block with steroid injection should be considered as a treatment option for patients with somatosensory CAP resistant to other therapeutic methods. The block can serve as a diagnostic value providing a guidance to the management of abdominal pain. If the block improves pain, this points to somatic pain and hence guides practitioners for further management.

Conflict of interest:

All authors declare they have no conflict of interest

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Nil

REFERENCES

1. Macrae WA. Chronic pain after surgery. *Br J Anaesth.* 2001;87:88-98.
2. Werner MU, Kongsgaard UE. Defining persistent post surgical pain: is an update required? *Br J Anaesth.* 2014;113:1-4.
3. Srinivasan R, Greenbaum DS. Chronic abdominal wall pain: a frequently overlooked problem. Practical approach to diagnosis and management. *Am J Gastroenterol.* 2002;97:824-830.
4. Applegate WV. Abdominal cutaneous nerve entrapment syndrome (ACNES): a commonly overlooked cause of abdominal pain. *Perm J.* 2002;6:20-27.
5. Soneji N, Peng PW. Ultrasound-guided pain interventions- a review of techniques for peripheral nerves. *Korean J Pain.* 2013;26:111-124.