



ULTRASOUND GUIDED TRANSVERSES ABDOMINIS PLANE (TAP) BLOCK FOR MANAGEMENT OF REFRACTORY POST HERPETIC NEURALGIA IN A 60 YEAR OLD DIABETIC MALE.

Anaesthesiology

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ABSTRACT

Post herpetic neuralgia (PHN) is a severe neuropathic pain syndrome. The treatment modalities range from oral analgesics to regional nerve blocks. Transversus abdominis plane (TAP) block seems to be an alternative for patients with PHN suffering from anterior abdominal wall pain refractory to conventional treatment. We discuss a case of a 60 year old diabetic male patient suffering from anterior abdominal wall pain due to refractory post herpetic neuralgia successfully treated with USG guided TAP block.

KEYWORDS

Post herpetic neuralgia, abdominal wall pain, Transversus abdominis plane block.

INTRODUCTION

Post herpetic neuralgia (PHN) is associated with severe neuropathic pain. It has adverse effects on the quality of life of the patient and burdens the health care system.¹

Neuropathic pain is defined as "pain arising as a direct consequence of a lesion or disease affecting the somatosensory system." It is characterized by spontaneous ongoing or shooting pain and evoked amplified pain responses after noxious or non-noxious stimuli.²

The exact mechanism of PHN is unknown. It is supposed to be caused by degeneration of the motor and sensory nerves due to injury of dorsal root ganglion.³ The treatment of PHN can include pharmacotherapy and interventional modalities. The first line pharmacotherapy of PHN comprises tricyclic antidepressants, antiepileptics and topical lidocaine. Opioids and tramadol are considered as second line pharmacotherapy while topical capsaicin and valproate are third line treatment.⁴ Interventional modalities include sympathetic and epidural block, intrathecal injections, pulsed radiofrequency and spinal cord stimulation.⁵

About 30% of PHN patients are refractory to conventional modalities.⁶ A transversus abdominis plane (TAP) block is considered to be an alternative in patients with refractory PHN related anterior abdominal pain to enable effective analgesia and reduced pharmacotherapy dependence.

Case Report

A 60 year old male patient, weighing 75kg, k/c/o T2DM on oral hypoglycemic drugs with HbA_{1c} 6.2% and good glycemic control, presented to the pain clinic with right anterior abdominal wall pain for 1 year.

He was diagnosed with PHN 1 year ago in right T₁₂, L₁ dermatomes leading to frequent hospital visits. He was taking oral Pregabalin 75mg, Nortriptyline 10mg, Tramadol 75mg and Acetaminophen 650mg daily. 3 months ago, thoracic epidural steroid injection T₁₂ was applied leading to relief in the aching pain however allodynia and hyperalgesia persisted. The pain was localised below the umbilicus on the right side, hence a right sided TAP block was planned after informed consent.

Under all aseptic precautions, USG guided right TAP block was performed using high frequency linear probe placed in the right midaxillary line in a transverse plane to the lateral abdominal wall between the lower costal margin and the highest point of iliac crest. A 22 Gauge Quincke needle was advanced until it reached the plane between the internal oblique and transversus abdominis muscle. After negative aspiration, 15 ml of 1% lignocaine was injected in the plane and the needle was removed.

A total of 3 such blocks at an interval of 1 week were performed. The patient's pain intensity was measured based on the Numeric rating scale (NRS) where 0 = no pain and 10 = worst possible pain. The pre-procedure NRS of the patient was 8. 3 weeks after the treatment, NRS was 3 and patient was experiencing a better quality of life.

DISCUSSION

The innervation of the anterolateral abdominal wall arises from the anterior rami of spinal nerves T₇ to L₁. TAP block involves injection of local anaesthetic into the interfascial plane between the internal oblique and transversus abdominis muscle.⁷ Traditionally, the anatomical landmark guided approach for TAP block involved a single point injection at the Lumbar triangle of Petit. The toxicity of local anaesthetics and injection in wrong structures such as vessels and peritoneum can be overcome by using ultrasound.

In PHN, the main route for pain is known to be damaged abnormal functioning or sensitized cutaneous nerve endings that send increased nociceptive stimuli to the dorsal horn of the spinal cord.⁸ Damaged and regenerating nerve endings can express changes in the number and location of sodium channels. An injured peripheral nerve is particularly susceptible to local anaesthetics. Since the local anaesthetics act via cutaneous nerve endings of abdominal wall, a TAP block is thought to show a long lasting therapeutic effect. Also, PHN damages all sensory nerve fibres causing sharp burning pain and also allodynia. A TAP block is known to block the motor and sensory nerves of the anterior abdomen, hence relieving this characteristic pain.⁹

CONCLUSION

TAP block is a safe alternative for patients with refractory PHN suffering from anterior abdominal wall pain accompanied by allodynia and hyperalgesia.

Conflict of interest:

All authors declare they have no conflict of interest

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Nil

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