

Computed Tomography(CT) guided Erector Spinae Block for a morbidly patient with chronic back ache

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ABSTRACT

In recent era, myofascial blocks are proving to be efficacious in relieving chronic pain conditions and post-operative pain relief. Ultrasonography, computed tomography, land mark techniques are being used for the same. The advantages of these techniques are that they are easy to perform with good analgesic effect and relatively safe.

Key words: Erector Spinae Block, Computed Tomography, chronic pain, obesity

Introduction :

Forero et al. first described erector spinae plane (ESP) block in 2016 for the treatment of chronic thoracic neuropathic pain and postoperative pain in thoracic surgery.¹ The erector spinae muscle (ESM) is a complex formed by the spinalis, longissimus thoracis, and iliocostalis muscles that run vertically in the back. The ESP block is performed by depositing the local anesthetic (LA) in the fascial plane, deeper than the ESM at the tip of the transverse process of the vertebra.² LA is distributed in the cranio-caudal fascial plane one dermatome a median of each 3.4 ml of injected volume.³ The diffusion of LA to the paravertebral space through the costotransverse foramina and the intertransverse complex (intertransverse and costotransverse ligaments: levators, rotators, and intercostal muscles) provides both visceral and somatic analgesia.²

Case Report

61 year old female patient was referred to the pain clinic with the complaints of low back pain and left leg pain since 6 months. It was not relieved on rest. On examination lower limb extension was painful and restricted with tenderness maximally at the right sacro iliac joint. Her straight leg raise(SLR) test was positive but FABER test was negative. Patient was a known case of bronchial asthma since 10 years and on regular medications. She also gave a history of obstructive sleep apnoea. Her weight was 150 kilograms with short stature of 154 cms and a body mass index of 63.2kg/cm². She had no other known comorbidities, no history of past surgeries or any known drug allergy. Her Mallampati classification was grade 3 with short neck and heavy jaw. On examination her cardiopulmonary status was within normal limits. Her MRI lumbosacral spine (plain) was suggestive of mild diffuse disc bulge at L4-L5 level causing lateral recess narrowing and indenting thecal sac and bilateral L5 traversing nerve roots. There was bilateral

facetral arthropathy from L1-L2 TO L5-S1 levels with vertebral body osteoporosis. She was prescribed tablet (Tab) Pregabalin 82.8 mg twice a day, Tab. Dupax 20 mg HS and Tab. Ultracet thrice a day. She was reviewed after 24 hours. Her numerical rating scale (NRS) for pain of 10 was reduced to 7. This helped localize the exact site of pain which was right sided paravertebral muscle spasm. After a thorough pre procedure general and systemic examination and written informed consents the patient was accepted under American Society of Anesthesiology (ASA) score three and taken in the CT scan room. All the monitors were attached. Under all aseptic precautions in left lateral position CT guided 2 ml diluted contrast was injected and erector spinae block was given on right side at L3 level with 20 ml 0.25% bupivacaine and injection triamcinolone (kenacort) with 22G Quincke Babcock spinal needle. The patient had almost immediate relief in pain. There were no adverse events during the procedure. On follow up her range of movements had improved with a relief in the chronic pain which had not improved with oral analgesic medications which she was taking since the last six months. On regular follow up of the patient there has been no need for rescue analgesia thus proving it to be a successful block technique for chronic pain management.



Figure 1 : Patient posted for erector spinae block

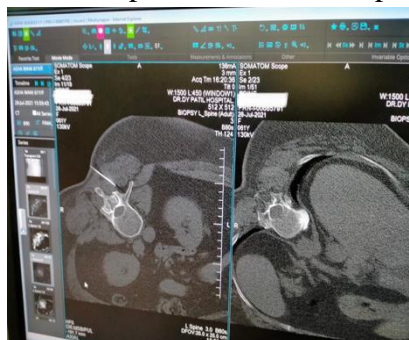


Figure 2 : CT image after the introduction of 22G spinal needle



Figure 3 : CT image after the injection of the contrast

Discussion:

Since decades resorts such as opioids, NSAIDs, have been used for chronic pain management. The unpleasant side effects like gastritis, nausea, vomiting has been a problem for many patients. Advanced techniques like the interfascial and myofascial blocks are now being proved to be extremely beneficial in such patients. Erector spinae plane (ESP) block is one such technique. ESP block is considered safer than epidural and can be used as an alternative to it on patient refusal, in patients with coagulopathy, thrombocytopenias. Challenges that we faced were due to the extreme obesity and pain positioning was difficult. Due to short stature the distribution of drug volume had to be titrated to prevent any untoward event. Since patient had a history of obstructive sleep apnoea prone positioning was difficult and hence avoided to prevent any difficulty in breathing and thus lateral position was preferred. CT scan guided approach helped for precision and prevention of any hazards. The limitations of this study is that it being a case report prospective study was not possible and thus more studies are needed to establish stronger evidence of its efficacy.

Conclusion

In morbidly obese patient with paravertebral muscle spasm CT scan guided erector spinae block has adequate relief in pain and has proved to be a very precise and comparatively safer procedure especially in high risk patients.

References

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