ERECTOR SPINAE BLOCK WITH CATHETER PLACEMENT FOR RELIEF OF CHRONIC PAIN FROM SHOULDER DISARTICULATION

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OBJECTIVE AND BACKGROUND

The erector spinae block provides analgesia of the anterior and posterior chest wall when performed at T5 with variable distribution reported between C7-T8 or T2-T9 dermatomes as indicated for neuropathic pain¹, rib fractures², and thoracic surgical procedures such as VATS³ and breast surgery⁴. When performed at T7 or T8, it may provide analgesia for abdominal surgical procedures such as ventral hernia repair⁵ and even relief of visceral abdominal pain as a result of bariatric surgery. There are even instances wherein the Erector Spinae has been used to alleviate painful conditions of the shoulder girdle⁶. This report of a case of chronic pain associated with a disarticulated upper extremity aims to address the patient’s long standing pain that was not totally relieved by specific nerve blocks corresponding to the body part involved and offer an alternative (erector spinae block) that not only is comparably easier to master and administer but noticeably of faster onset in delivering relief of pain.

METHOD AND RESULTS

A 65 year old male , who had left extremity amputation near the shoulder joint secondary to a vehicular accident 14 years ago was referred to the pain management service because of chronic pain of the scapula and shoulder joint and the anterior chest near the axilla described as dull constant pain ranging from 5-9/10 pain score, aggravated by change in position, barely relieved by Tramadol with Paracetamol tablet as needed for pain, Pregabalin 75 mgs every 12 hours (former physician suggested an impression of “phantom limb pain “). The patient had difficulty sleeping thus prompting consult. Initial physical assessment revealed trigger points at the pectoral area near the axilla and suprascapular area. Requesting immediate intervention, a suprascapular nerve block was done under ultrasound guidance using (Sonosite M-Turbo, Sonosite Inc, Bothell, Washington, USA) linear high frequency probe, with 0.25% L-Bupivacaine with 40 mgs of methylprednisolone in a 10 ml total volume injected for the shoulder joint and scapula. PECS 2 block also done under US for the anterior chest wall pain with a total volume of 20 ml. The patient was sent home after an hour of observation with a pain score of 0-2/10 resting and with movement, with take home medications of Oxycodone HCl (Oxynorm) and Pregabalin 75 mgs BID continued.

A week after, the non-compliance with the opioid prompted return of the pain. Another consult was setup wherein this time, pain was noted relieved at the shoulder joint area but with the same intensity as before in the anterior chest and scapular area, a suggestion of doing an erector spinae block under ultrasound guidance was given. Seeing the convenience of the procedure in the clinic setting with minimal complications involved, the patient agreed. The patient was then hooked to monitors and was placed in a sitting position. Sonosite Edge with a high-frequency linear-array transducer was used to identify the T5 transverse process by counting down from the vertebra prominens and other landmarks such as the spine of the scapula (T4) and the tip of the scapula (T7). A longitudinal parasagittal plane was sought identifying the transverse process of T5. An 8-cm 22G block needle (BBraun Stimuplex 360) was inserted in-plane directed towards the caudal direction positioning the needle tip between the posterior fascia of the erector spinae muscle and the T5 transverse process. Hydrodissection with normal saline was done and confirmation with fluid lifting the erector spinae muscle away from the transverse process observed, topping up with 30 mL of 0.25% L-bupivacaine with 1 % Lidocaine was injected. The patient noted immediate relief of pain within 10 minutes after the injection and exhibited no limitation in motor movement. The numbness was noted concentrating on the anterior chest more on the lateral aspect. He was discharged with the same prescription home medications and was advised follow up after two weeks with the agreement that if the pain returns with the same intensity, there was the possibility of catheter delivered continuous erector spinae blockade.

There was a return call after 1 week whereby patient was again non-compliant with the pain medications and the significant return of pain on the anterior lateral chest near the stump.After informed consent and application of standard monitoring, the block was carried out at the T5 level, with same settings for the Ultrasound. The patient was in a lateral decubitus position with the probe oriented in the parasagittal plane. A bolus of 20ml of 0.25% Levobupivacaine given after which a peripheral nerve block catheter (BBraun Contiplex) was then positioned, and a further 5ml of 0.25% Levobupivacaine was injected via the catheter under ultrasound guidance, with catheter tip confirmation. The catheter was secured in place.Patient was observed for an hour and was discharged after the continuous infusion of 10 ml per hour 0.125% L-Bupivacaine was started using an fixed pressure elastomeric pump (Easypump by BBraun), and was continued for four days with take home medications of Morphine Sulfate 10 mgs per tablet BID. The patient phoned in after 4 days expressing relief with a manageable score of an occasional 2- pain score. He was advised follow-up after a month for re-assessment.

CONCLUSION:

The erector spinae continuous infusion block has opened a lot of possibilities for answering calls to alternative pain interventions that are easy to master and yet is not compromising safety and quality of the pain relief achieved. As it was noted in this case report, even onset fo pain relief was more than ideal. Perhaps, a lot more still can be gained through discovery of the widening array of interventions to cure pain by the Erector Spinae Block.

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Patient in lateral decubitus position during the ES Block

Specified points where patient was relieved after the block

Ultrasound localisation of T5 level with Erector Spinae Muscle, Trapezius, Rhomboids