ERECTOR SPINE PLANE BLOCK : NEW REGIONAL ANALGESIC OPTION FOR THORACOSCOPY

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BACKGROUND:

A novel interfascial block has been applied by Forero et al.'s in patients with severe thoracic neuropathic pain and acute postoperative pain after thoracoscopy (1). We read with interest the description of the erector spine plane (ESP) block and the anatomy revision made in this article.

Therefore, we would like to describe a case where this new regional technique has been applied for a thoracoscopic procedure.

This surgery requires general anaesthesia and one-lung ventilation. Analgesia involves fentanyl during surgery and non-steroidal anti-inflammatory drugs postoperatively. Regional analgesia techniques, as epidural or paravertebral blocks, are usually not performed and are not justified in this type of procedures. Although other regional blocks of the chest wall such as pectoral block and serratus block have recently been proposed, evidence indicates that they may not cover the surgical area.

The ESP block seems to affect both dorsal and ventral rami of the thoracic spinal nerves and good quality of analgesia may be achieved with less potential complications. Cadaver investigations performed by these authors showed penetration of injectate anteriorly through the costotransverse foramen and into the vicinity of the origin of the dorsal and ventral rami when dye was injected into the interfascial plane posterior to the erector spinae muscle. This spread was not observed with injection superficial to erector spinae muscle.

CASE REPORT:

We performed this new regional technique in a patient who underwent thoracoscopic surgery for superior left lobe lung resection.

Before the induction of anaesthesia the patient was positioned in right lateral decubitus with the upper limb along the body. We believe that this block can be easily performed in this position and more comfortably for the patient.

The ultrasound screen was positioned in front of the operator who stayed behind the patient for a better control of the probe. As for the paravertebral block, anatomic landmarks (shoulder blade and spinal levels) were marked to determine the level at which the ESP block should be performed. The linear ultrasound probe was positioned on the left side with longitudinal orientation 3cm lateral to the T5 spinous process. First, an horizontal scan of the area was performed and three muscles, superficial to the transverse process, were identified by this order: trapezius, rhomboid major and erector spinae. Second, a 100 mm block needle was inserted in plane with a caudal orientation until the posterior interfascial space of the erector spinae muscle. A total of 20 ml of levobupivacaine 0,25% was injected in this area with a single injection. After reading the Forero's cadaveric study we choose to inject the local anesthetic in the deep interfascial space over the superficial. Afterwards the patient was submitted to a general anaesthesia which went uneventfully.

In the postoperative care pain assessment the patient showed an EVA 0 in movement as resting, also maintaining thermoanalgesic sensibility. It was completely symmetric with contralateral side. Controls were made at 12, 24 and 48h. EVA 0 did not change in any control, being the coadjuvant analgesia minimally needed. Due to this optimum analgesic control the patient was able to breathe deeply and make a very efficient breathing physiotherapy.

The patient was discharged at 72h without reporting any complication neither needing rescue analgesia. He also had an adequate FRC.

DISCUSSION:

We think that this new regional block can be a paramount tool to control acute postsurgical pain after minimal invasive thoracic surgery. However, due to the lack of evidence of the ESP block in the acute pain setting, further studies should be performed to evaluate this technique.

References:

Forero M, Adhikary S, Lopez H, et al. The Erector Spinae Plane Block: A Novel Analgesic Technique in Thoracic Neuropathic Pain. Reg Anesth Pain Med 2016;41: 00–00