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BJAN-D-21-00090 - Letter to the Editor**Quadratus lumborum block in supine position for postoperative pain management in acetabular fracture surgeries: cadaveric and clinical experience**

Ali İhsan Uysal^{a,*}, Mustafa Deniz Yörük^b, Başak Altıparmak^c, Melike Korkmaz Toker^a, Cem Yalın Kılınç^d, Semra Demirbilek^c

^a Muğla Sıtkı Koçman University Training and Research Hospital, Department of Anesthesiology and Reanimation, Muğla, Turkey

^b Muğla Sıtkı Koçman University, Department of Anatomy, Muğla, Turkey

^c Muğla Sıtkı Koçman University, Department of Anesthesiology and Reanimation, Muğla, Turkey

^d Muğla Sıtkı Koçman University, Department of Orthopedics and Traumatology, Muğla, Turkey

*** Corresponding author.**

E-mail: alihsanuysal@gmail.com (A.İ. Uysal).

ORCID ID: <https://orcid.org/0000-0002-3320-4558>

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Dear Editor,

We read with interest the case report by Sandeep Diwan et al on supine coronal midaxillary approach to anterior quadratus lumborum block (SCAQLB).[1] Acetabular fractures are usually painful medical conditions. Positioning the patient for regional anesthesia is challenging due to the localization of the fracture and severe pain. Quadratus lumborum block (QLB) in supine position gives advantageous in acetabular fracture surgeries for being both easily applicable and potentially effective in postoperative pain management.

In our clinical practice we started to utilize QLB in supine position for acetabular fracture surgeries with a methodology explained by Blanco et al. since 2019 in caesarean section cases.[2] After seeing the effectiveness of it first in four clinical cases, we investigated the distribution of local anesthetic in a fresh cadaver.[3] According to the results of cadaver dissection, we observed that there was no dyeing in the sacral plexus region. On

contrast the branches of the lumbar plexus which are femoral nerve, ilioinguinal nerve, lateral femoral cutaneous were dyed (Fig. 1). This spread of methylene blue dye may explain the mechanism of effectiveness of QLB in acetabular region.

The use of QLB in the supine position can be an efficient option in postoperative pain management in acetabular fractures. The block does not require the repositioning of the patient. In literature lumbar plexus block was reported to be effective in acetabular fracture pain management, since the primary innervation of the acetabular region originates from the lumbar plexus.[4] As QLB is a fascial plane block, unlike the lumbar plexus block, it is not directly applied to the nerve site; therefore, the risk of intraneural injection is lower.

We found an opportunity to perform SCAQLB in three patients. We can say that SCAQLB is easy to perform and has some advantageous for visualization of quadratus lumborum muscle than Blanco et al methodology.[2] Further studies on fresh cadavers may reveal the effectiveness of SCAQLB.

Conflicts of interest

The authors declare no conflicts of interest.

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Figure 1 – Distribution of the methylene blue in supine QLB. PMM, Major Psoas Muscle; FN, Femoral Nerve; IM, Iliacus Muscle. White Arrow, Ilioinguinal Nerve; *, Lateral Femoral Cutaneous Nerve.

