CORRESPONDENCE

Ultrasonography-guided modified thoracolumbar interfascial plane block: a new approach

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To the Editor,

A recent study published by Hand *et al.* described an ultrasonography-guided thoracolumbar interfascial plane (TLIP) block.¹ This block involves injecting local anesthetics between the multifidus and longissimus muscles at the third lumbar vertebral level to block the dorsal rami of thoracolumbar nerves.² Hand *et al.* made the injection between the multifidus and longissimus muscles by positioning the block needle at a 30° angle from the skin and advanced it from a lateral to medial direction (Figure).

Herein, we describe our TLIP modification where we inject the anesthetics between the longissimus and iliocostalis muscles after having advanced the needles at a 15° angle in a medial to lateral direction. Our modified method has several advantages.

1. Advancing the needle from a medial to lateral direction eliminates the risk of possible inadvertent neuraxial injection.

2. Injecting between the iliocostalis and longissimus muscles results in a dermatomal area of analgesia similar to that obtained with an injection made between the multifidus and longissimus muscles. We have demonstrated this area of analgesia using radiopaque dye injections (with specific patient consent) where the distribution of the local anesthetics spread two levels caudal and cranial to the injection site. Twenty minutes after injection, we could show a corresponding dermatomal area (using a pinprick test) of reduced sensation.
3. Sonographic imaging more easily discerns the distinction between the longissimus and iliocostalis muscles than between the multifidus and longissimus muscles, thereby potentially increasing the success rate of the block.

These modifications to the TLIP block will require further study to investigate their potential advantages more fully. Such investigations, including magnetic resonance imaging and cadaveric studies combined with ultrasonography, should be beneficial for evaluating the block's potential anatomic spread. When compared with some other nerve blocks, interfascial plane blocks are highly dependent on sufficient volumes of local anesthetics to spread between the muscle layers and fascial planes. The TLIP block might be useful for 2 and 3 vertebral level spinal surgical procedures as well as minimally invasive spinal surgery.

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