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Ultrasound Evaluation Rules Out a Suspected Hematoma After Continuous Infraclavicular Brachial Plexus Block.

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cushioning. Velcro straps were used to secure the foam to the Mayo stand for leg stability (Fig. 1). In a neutral supine position, the Mayo stand first was positioned in a range of heights to allow for different degrees of knee flexion. With the Mayo stand set at a desirable height for the lower extremity, the operating table was then tilted laterally to allow increased exposure of the lower extremity.

With the combined use of adjusting the height difference between the Mayo stand and the OR table, we were able to achieve 90 degrees of flexion. Tilting the OR table, we were able to provide medial rotation of the extremity, allowing further access to the posterior fossa and in turn the sciatic nerve. This setup allowed for unimpeded US probe manipulation leading to optimal image quality with easily discernable anatomical structures.

This report describes an immediate and easily accessible setup that allows optimal positioning for the supine placement of a US-guided popliteal nerve block. All items are readily available and cost-effective. The setup is particularly useful for providing leg stability in those with large body habitus and limited mobility. The Mayo stand can be sterilized between cases or draped with a sterile sleeve. Prone foam pillows and straps are disposable. Ease of sterility and usage of disposable equipment aid in reducing the risk of infectious complications from repeat use of equipment. We have begun to use this technique routinely when performing a supine US-guided popliteal nerve block.

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The authors declare no conflict of interest.

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Ultrasound Evaluation Rules Out a Suspected Hematoma After Continuous Infraclavicular Brachial Plexus Block

Accepted for publication: February 28, 2018.

To the Editor:

A 27-year-old man presented to our burn center with second-degree burns to the left forearm. Initial attempts to perform bedside debridement and dressing changes using opioids for analgesia were attempted but were not tolerated. Therefore, the regional anesthesia service was consulted for a continuous brachial plexus block to facilitate dressing changes.

Using an in-plane, ultrasound-guided technique as previously described,¹ an infraclavicular brachial plexus block was performed with a total of 30 mL of 2% lidocaine with 1:400,000 epinephrine injected via a 17-gauge Tuohy needle. A flexible 19-gauge perineural catheter was inserted under real-time ultrasound guidance. A continuous infusion of 0.2% ropivacaine was begun (basal rate 8 mL/h, patient-controlled bolus dose 4 mL, 30-minute lockout). During the procedure, arterial vascular puncture with aspiration of blood was observed twice while passing between the lateral cord of the brachial plexus and the axillary artery. Anticoagulation was held after the procedure

because of concern for hematoma, and prophylactic dosing of enoxaparin (40 mg administered subcutaneously once per day) was resumed the next day.

The following morning, the patient complained of painful swelling in the axilla near the catheter site. He stated that the swelling had been present the previous night but could not say if it was changing over time. On physical examination, a 3- to 4-cm tender mass could be palpated in the axilla. This presentation is consistent with a hematoma at the block site,² and this was high on the differential given the vascular punctures during placement of the catheter and his anticoagulated status. We evaluated the site of the swelling with the high-frequency linear probe (13–6 MHz, HFL38; M-Turbo SonoSite; FUJIFILM SonoSite, Inc., Bothell, Washington) and discovered a 1.5-cm lymph node (Fig. 1). The discovery of this lymph node reassured our team that the patient's symptoms were unlikely to represent a hematoma and that he did not require further evaluation, intervention, or holding anticoagulation. The catheter was removed on postoperative day 4, and the block resolved with no neurologic sequelae.

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The University of California San Diego Institutional Review Board (San Diego, CA) waives review requirements for case reports. The patient signed a consent form permitting use of his relevant medical history, sonographic imaging, and nonidentifying photographs for publication in the form of a case report.

FIGURE 1. Ultrasound image showing a 1.5-cm lymph node to be the likely culprit for the patient's tender axillary mass.

The authors declare no conflict of interest.

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A Call for Scrutiny of the Transversus Abdominis Plane Block Label

Accepted for publication: December 20, 2017.

To the Editor:

We read with interest the recent randomized controlled trial by Öksüz et al¹ comparing quadratus lumborum blocks versus transversus abdominis plane (TAP) blocks in a pediatric population. The authors conclude that the quadratus lumborum block proved superior in terms of analgesia in children undergoing lower abdominal surgery. This comes as no real surprise, as the horde of approaches that currently reside under the banner of “transversus abdominis plane blocks” are doomed to fail when compared with blocks inserted posterior to the midaxillary line. The initial concept of the TAP block was the introduction of local anaesthetic solution into the TAP plane, posterior to the midaxillary line, through the lumbar triangle of Petit.² The concept was to provide effective blockade of the innervating nerves of the anterior abdominal wall.³ This approach espoused that one could effectively block not only the anterior cutaneous branches, but also the lateral cutaneous branches that leave TAP at approximately the midaxillary line. The introduction of ultrasound to everyday clinical practice allowed this type of analgesic modality to be more widely available to clinicians. However, the anatomical confusion of the region encouraged clinicians to move the ultrasound probe anterior/medial on the abdominal wall to obtain the classic picture of the 3 muscles that comprise the lateral abdominal wall. However, in so doing, the dynamic effects of the original loss-of-resistance blocks have been lost, and a more inferior block has been produced and labeled as a TAP block.

If one was to look at the majority of studies that have been produced under the label of TAP blocks, the point of entry

varies dramatically, but inevitably it is anterior to the midaxillary line.⁴ This is important as the block now becomes just a field/plexus block of the anterior abdominal wall, where the more posterior approach not only is a limited field block, but through extension to the thoracic paravertebral space now is a thoracic paravertebral, or even an epidural of limited extent. Like all blocks, there is also spread through the various lymphatic and vascular extensions producing a centrally acting block. It is this extension, especially to the paravertebral space, which explains the prolonged duration of blockade obtained in multiple studies.⁵ Therefore, comparing an inferior method of performing a so-called ultrasound-guided “TAP block” with the quadratus lumborum block leads to unfair comparison and dilutes the relevance of these results.

In fact, if one were to be complete in the expression of fact, the original landmark-based most likely was never a TAP “field” block, but rather a mislabeled quadratus lumborum block. The type will be left to the reader to argue.

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The authors declare no conflict of interest.

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Reply to Drs Nee and McDonnell

Accepted for publication: February 24, 2018.

To the Editor:

We would like to thank Drs Nee and McDonnell¹ for their valuable comments on our study.² Transversus abdominis plane (TAP) block was first reported in 2001, and again in 2007, with McDonnell and colleagues³ identifying and implementing the double-pop technique as an effective method for lower abdominal surgeries. The introduction of ultrasound into the practice of regional anesthesia has made application of the block easier, especially in children, and allowed introduction of new blocks and many different approaches under ultrasound guidance. Authors mentioned that when TAP block is performed under ultrasound guidance, the block site is generally located in the anterior axillary line, and it is not as effective as the classic TAP block. In our study, we performed ultrasound-guided lateral TAP block, which is generally recommended for pediatric lower abdominal surgery. If we were using the landmark-guided double-pop technique, we wouldn't see the location of local anesthetic spread. McDermott and colleagues⁴ have shown that using blind approach approximately only 46% of the consultant anesthesiologists were able to give local anesthesia to the right location (TAP area). In our study, we expected that, by application of 0.5 mL/kg local anesthetic, sufficient volume is provided for distribution of the local anesthetic. That is why we think that, using our approach, it is fair to compare ultrasound-guided TAP block and quadratus lumborum block (QLB). The recommended mechanism of action for QLB is also most probably paravertebral spread.⁵ Yet we are not sure whether posterior TAP block is exactly the same with QLB block. There is confusion among clinicians, which needs to be clarified regarding the nomenclature of blocks. Should any injection just few centimeters away from each other be named with a new name?

We need both clinical studies like the one we performed to compare the clinical effectiveness of different interfascial plane blocks, yet anatomic studies regarding LA distribution are also lacking.⁶ This subject will continue to be an area of discussion and research in the field of regional anesthesia.

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