Ondansetron and Shivering During Cesarean Delivery Under Combined Spinal Epidural Anesthesia: A Live Issue

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To the Editor:

We read with interest the article by Browning et al,[1] reporting that intravenous ondansetron 8 mg before performing combined spinal epidural anesthesia in women undergoing elective cesarean delivery does not decrease the incidence or severity of shivering. We congratulate and applaud their interesting and important work on this topic; however, there are some issues we feel need to be addressed:

Browning et al[1] reported a frequent incidence of shivering in patients who received saline placebo (47%). However, they classified patients as having shivering if they scored 1 or greater on a scale of 0 to 4. According to this scale, which was originally devised to assess patients recovering from general anesthesia,[2] patients were graded "1" when there was "piloerection, peripheral vasoconstriction, peripheral cyanosis without other cause but without visible muscular activity." During combined spinal epidural anesthesia, peripheral vasoconstriction in the upper body is a normal compensatory physiological response to vasodilatation in the lower body and does not necessarily reflect a clinically important shivering response. The authors found that shivering may interfere with monitoring. However, if there is no visible shivering, such problems are unlikely. Arguably, patients graded "2" (visible muscular activity confined to 1 muscle group) could also be considered to have only a mild disturbance. Therefore, the actual clinical problem is unlikely to be as great as the authors suggest, which is supported by our own clinical experience. We feel that this caveat should be taken into account when considering the effect of giving prophylactic intravenous ondansetron. Interestingly, Kelsaka et al[3] also assessed shivering; however, they classified patients as having shivering only when this was visible to the investigators and found that prophylactic intravenous ondansetron 8 mg before spinal anesthesia significantly decreased the incidence of shivering.

In addition, Browning et al[1] also reported that prophylactic ondansetron was not associated with a reduction in nausea and vomiting. However, they did not provide supporting data.

We agree that further evaluations of prophylactic ondansetron with larger sample sizes are required.

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The authors declare no conflict of interest.

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Electronic Tutorial for Ultrasound-Guided Regional Anesthesia Has to Be Accurate to Be of Value

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To the Editor:

We read with interest the article by Wegener et al[1] on the value of an electronic tutorial for ultrasound-guided regional anesthesia. Although we agree that such a tutorial may serve as a useful reminder of anatomical detail when planning a block, we are concerned that any information contained within such a tutorial has to be anatomically accurate and show the best possible scanning positions to maximize image acquisition.

To illustrate the importance of accurate transducer position, we would like to point out that, in the example shown of the supraclavicular block approach, the transducer position follows the line of the clavicle, whereas the plexus lies at approximately 45-degree angle relative to it. Therefore, this transducer position does not give a true transverse view of neural structures, and the ultrasound image obtained shows instead a rather oblique appearance of the trunks (Fig. 1).

We submit that the clavicle should not be used as a landmark for transducer position because of its variable length and angle in relation to the plexus. For optimum image quality of the supraclavicular plexus, the transducer should be positioned at the base of the neck with its short axis pointing toward the shoulder. This focuses the plexus into its most compact diameter including the suprascapular nerve at the posterior border of neural structures. This in turn allows safer and more accurate needle advancement from a posterior in plane approach.

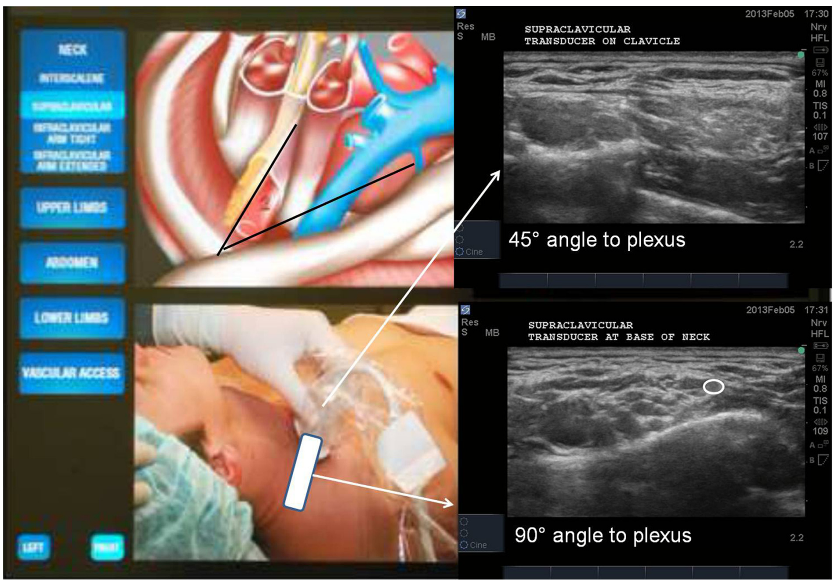

FIGURE 1. Supraclavicular plexus transducer position with ultrasound appearance at 45 and 90 degrees. The suprascapular nerve is highlighted.

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Patient and Needle Positioning During Popliteal Nerve Block

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To the Editor:

It was with great pleasure that we read the work of Missair et al[1] contributing to the understanding of the deliberate subfascial, or subepineural, needle approach when performing popliteal nerve blocks. In brief, they compared blocks conducted via a lateral in-plane ultrasound (US)–guided trajectory at the level of the sciatic bifurcation where the needle tip was positioned either within the fascial sheath surrounding the nerve or outside it. Using 3-dimensional US, they were able to demonstrate, as one might expect, a greater perineural volume of local anesthetic (LA) and further perineural longitudinal spread when the LA was injected into a confined space around the nerve. This was associated with a more reliable complete sensory block of longer duration than extrafascial placement.

We strongly agree that subfascial injection provides a very reliable, dense block of swift onset and extended duration and would like to share the technique and the particular arrangement of the patient and US probe that we refer to as the "Oxford position," which differs from a more classic lateral approach. We started evolving this position in 2004 as a nerve stimulator–based procedure, moving to the current US-guided path in 2007. The block is performed with the patient supine. The leg is raised straight, flexed at the hip. The leg is then securely suspended in this position (Fig. 1). Initially, we used a noninflated ankle tourniquet, but now we utilize the ankle distractor that the orthopedic surgeons in our unit use during ankle arthroscopies. Either of these can be safely hung from the hook of a secured drip stand. The bifurcation of the sciatic nerve is then identified with the US probe applied to the posterolateral aspect of the thigh, with the echogenicity of the nerve often being increased by a tilt of the probe slightly toward the ceiling from right angles to the skin. In this position, the bifurcation point is frequently observed as having a somewhat U-shape with an indentation at about the 12-o'clock position within the more circular fascial sheath. This notch provides a convenient subfascial target point for the needle tip, which can be readily approached either in-plane, with an entry point immediately beside the edge of the probe, or out-of-plane. After a small test injection, we typically inject 20 to 30 mL of the LA of choice with a characteristic ballooning of the fascial layer. Expansion of the space with LA is confirmed by scanning up and down the nerve. We then document the procedure and postoperative performance of the block using a standardized sticky label, as described by Janes et al.[2]

FIGURE 1. The "Oxford position" for popliteal blocks, with the leg suspended with an ankle distractor from a drip stand.

We believe that the straight-leg-raise "Oxford position" has several advantages. The secure suspension of the leg provides a stable, immobile platform for the operator performing the block. There is no need to reposition the patient (eg, laterally) to perform the block, and it is straightforward to proceed to either a femoral or saphenous block subsequently. It can also be used to perform more proximal sciatic blocks. The position straightens and tensions the nerve, bringing it more superficial and thus making it an easier target. We also suggest the straightening the nerve and tensioning its sheath would encourage the longitudinal spread of LA when injected into the space.

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