

CORRESPONDENCE

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Combined Spinal-Epidural Anesthesia Using Needle-through-needle Technique

To the Editor:—Recently kits for producing combined spinal-epidural anesthesia (CSE) using a “needle-through-needle” technique were produced. B. Braun Medical Ltd. produces a kit with a standard Tuohy needle and a spinal needle that extends 13 mm beyond the tip of the Tuohy needle (fig. 1). Another CSE kit (Vygon Ltd.) has a modified Tuohy needle with an aperture in its curve (back hole) for the insertion of the spinal needle, which protrudes 10 mm beyond the tip of the epidural needle (fig. 2). With the aperture for the spinal needle differing from the path of the epidural catheter, it is suggested that insertion of the catheter through the dural puncture would be less likely. We compared these two kits in 40 consecutive patients presenting for total knee arthroplasty, assessing any difficulty in performing the blocks or any specific complication of the technique.

All the blocks were performed by the same operator. The epidural space was identified using the loss of resistance to air technique. The spinal needle was advanced until the tip was felt to puncture the dura. After appearance of cerebrospinal fluid (CSF), 2.5 ml 0.5% plain bupivacaine was injected. The spinal needle was withdrawn and the epidural catheter inserted and flushed with normal saline. In the recovery room, when there was evidence of regression of the motor block, an infusion of 0.1% bupivacaine with fentanyl (2 µg/ml) was started after a test dose of 3 ml 2% lidocaine with adrenaline. Infusion rate varied between 4 and 10 ml/h.

Insertion of the Tuohy needle and identification of the epidural space was achieved without difficulty in both groups. Protrusion of the spinal needle proved inadequate and dural puncture was not achieved in three patients (15%) in the Vygon group. Dural puncture was successful when a longer needle was used. The length of spinal



Fig. 2. The Vygon CSE set.

needle was adequate in the Braun group. Several drops of clear fluid were observed at the hub of the Tuohy needle on withdrawal of the spinal needle in seven patients in the Braun group and five patients in the Vygon group. At this stage, fluid could not be aspirated through the Tuohy needle with a syringe. In no case was the volume of fluid large nor was the flow persistent. This fluid may be caused by drainage from the spinal needle or possibly a small leak from the dural puncture. All patients had good surgical anesthesia and postoperative analgesia. None of the patients had unexpectedly high sensory blocks with the epidural infusion in the postoperative period.

The feel of the needle puncturing the dura was absent when using the Braun set. This could be due to the fact that the spinal needle has to brush the curved bevel of the Tuohy needle. The spinal needle in the Vygon set had a smoother feel to insertion and dural puncture was more easily felt. The spinal needle in the Vygon set could curve along the bevel of the Tuohy needle; to prevent this it is necessary to advance the spinal needle slowly while bending the hub toward the bevel of the Tuohy needle (fig. 3).

In conclusion, satisfactory surgical and postoperative analgesia from combining spinal and epidural techniques respectively using CSE were obtained in patients undergoing total knee arthroplasty. One concern with the technique is finding CSF in the Tuohy needle after

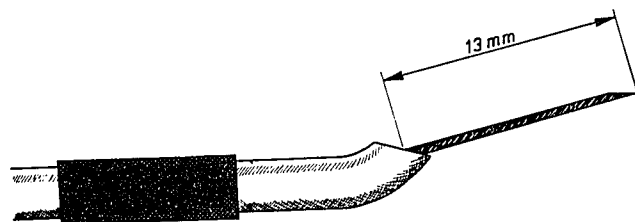


Fig. 1. The Braun CSE set.

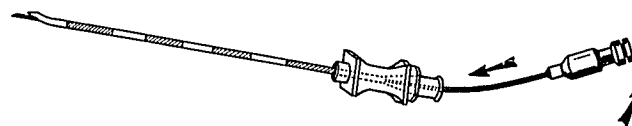


Fig. 3. The technique to direct the spinal needle through the aperture in the Tuohy needle.

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removal of the spinal needle. Additional precautions may be necessary to prevent the development of high spinal block, as it may be difficult to identify subarachnoid injections with a standard test dose in the presence of spinal anesthesia. Although we had no evidence of intrathecal placement of the epidural catheter in this small number, there is the possibility that it may occur through the dural puncture. From this study, we believe that an ideal needle set would be one with a modified Tuohy needle and a spinal needle that protrudes more than 13 mm beyond the Tuohy needle.

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Overcoming the Language Barrier in Obstetric Anesthesia Practice

To the Editor:—DeVore and Koskela¹ reported that non-English-speaking women in a hospital in California were more likely to deliver without epidural analgesia than comparable women who did speak English. They suggested that better communication with the non-English-speakers might allow more to choose epidural analgesia and proposed prenatal information brochures in several languages. Patients who speak French or English as a second language usually prefer to receive the information in their mother tongue.

At the Royal Victoria Hospital, Montreal, information brochures on epidural analgesia are available in the obstetric suite in the following languages: French, English, Italian, Greek, Spanish, Portuguese, Russian, Polish, Arabic, Turkish, Japanese, Chinese, Vietnamese, Cambodian, Tamil, Hindi, Urdu, Farsi, and Inuit. This range of languages remains inadequate, but the overwhelming majority of patients are served. Translations were obtained at no cost by approaching anyone who could help—specific ethnic community organizations, physicians (especially obstetricians), nurses, patients, and even a spouse who did the Japanese translation at the bedside during a protracted labor. It is possible that some of the translations are of poor quality, but in practice, the message gets through, and there have been no major misunderstandings.

The brochure is offered to the patient in early labor. Benefits and complications of epidural analgesia are listed, emphasizing that the procedure is an option and will only be done at the patient's request. Use of the brochure also avoids complete reliance on the spouse for transmission of information to the patient. A woman who can only communicate through her spouse is at a disadvantage if subjected to

his prejudices. I have noted that the spouse is occasionally reluctant to pass on any information to a patient in pain, stating categorically that she does not want an epidural but implying that he does not want her to have one. The use of information brochures contributes to the apparent lack of interethnic variation in the rate of utilization of epidural analgesia in labor in this institution.

A further aid to epidural analgesia when communication is poor—and even when it is good—is a picture of the correct position to adopt for the procedure. I use an illustration prepared by a medical artist together with a photograph from a fashion magazine of a model who is by chance in the perfect posture. After seeing the illustrations, patients immediately adopt the correct position, saving considerable time spent on explanation and demonstration.

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