under general anesthesia. We have one concern dealing with the size of the needle. The authors used a 17 G Tuohy needle which is much larger than the usual 20 or 21 G needle used in this setting. This practice not only increases the level of pain, but also the risks of bleeding during the placement of the catheter and the secure fixation procedure. Moreover, this procedure could be time consuming and cause delay in a busy orthopedic department.

The reduced incidence of hemidiaphragmatic paralysis observed when interscalene block is performed through the catheter is interesting. We made a similar observation by measuring the hemidiaphragmatic excursion (HE) by means of ultrasonography in patients receiving 30 ml ropivacaine 0.5%, either through an interscalene catheter or as a single shot injection according to Winnie's technique using a nerve stimulator. We found a 60% decrease in HE in the interscalene group *vs* 80% in the single shot group. We believe the main factor explaining the better preservation of HE is the placement of the catheter which permits preferential distal distribution of local anesthetic. This practice may well become the interscalene block technique of choice for patients with severe pulmonary disease.

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REPLY:

Thank you for the opportunity to respond to the letter of Drs. Borgeat and Nadig.

1. In our experience of 2,125 catheter placements, we have not encountered a single instance where the Tuohy needle damaged the catheter.
2. The evidence for recommending that nerve blocks should be done on awake patients only, is unconvincing and largely subjective. The work of Auroy *et al.*¹ quoted by Coleman and Chan in their editorial² yielded an incidence of nerve damage of four of 21,278 nerve blocks. This incidence is simply too small to come to any meaningful conclusion. Fanelli *et al.*,³ in a well conducted study, concluded that sedation/analgesia should be advocated during block place-

ment to improve patient acceptance. We support their views. Furthermore, the Tuohy needle has, to our knowledge, never been implicated in peripheral nerve damage.

3. We place blocks under general anesthesia, conscious sedation with propofol or in awake patients following proper skin and subcutaneous infiltration with lidocaine. The choice is dictated by the clinical situation. Pain is therefore not an issue and we have not yet encountered an episode of bleeding that would have been prevented by using a thinner needle. Epidurals are regularly done with 17 G Tuohy needles on awake patients without any of the problems mentioned.
4. In experienced hands, the procedure does not lengthen the anesthetic time by more than ten minutes.
5. We share the opinion of Drs. Borgeat and Nadig on hemidiaphragmatic paralysis and indwelling interscalene catheters.

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Intrathecal meperidine

To the Editor:

Murto *et al.*¹ investigated the effect of 0.15 and 0.30 mg·kg⁻¹ of intrathecal meperidine on spinal anesthesia produced by lidocaine. They found that 0.30 mg·kg⁻¹ of meperidine intrathecally prolonged postoperative analgesia and reduced the requirements for parenteral analgesics. They also reported the regression of the sensory block.

However, five patients in all groups needed supplementary *iv* anesthesia, which consisted of propofol