

Letter to the Editor

I was very interested in the case report by Doctors Rosenblatt and Cress which appeared in the Volume 6, No. 2 issue [Rosenblatt RM, Cress JC. Modified Seldinger technique for continuous interscalene brachial plexus block. *Regional Anesth* 1981;6:82-84]. Though it conforms to all the norms of presentation, reasoning of the authors' open question, their interpretation of their last reference (Selander, *et al.*) is extremely self-serving to their own end of reporting this technique, and one very questionably "successful" case does not represent a therapeutic triumph.

We have had much experience with upper extremity regional anesthesia, and we have found that 0.5% marcaine with epinephrine, 1:200,000, in the volume of 40-50 ml produced a relatively rapid onset of block, lasting approximately 22 hours. Should the case go beyond this time, a reblock of the extremity with any one of the accepted techniques can be done. Our experience with 0.25% bupivacaine has demonstrated it to produce an inadequate block, especially when a tourniquet is being used and if the surgeon requires muscular paralysis of the extremity. Therefore, what is the utility of a complex continuous technique which may only deter the use of regional anesthesia by unsophisticated anesthesiologists? Bonica, *et al.* reported large dosage levels of bupivacaine in multiple intercostal nerve blocks in a single sitting with no evidence of toxicity.

My recollection of Doctor Selander's series of articles was that he reported a relatively small number of patients. They implicated several factors, one of which was the use of epinephrine, which many investigators here in the United States feel should be used. He implicated also the size of the needle, and certainly the author, using a needle of 18-gauge or larger, would run afoul of his admonition in that regard, and although there was a "statistically significant" difference in the incidence of neuritis we considered the results open to question because of the small number of patients involved.

In addition, an upper extremity regional anesthetic technique using bupivacaine in which the patient required a general anesthetic after three hours because of back discomfort, etc. is somewhat open to question because, in our experience of several thousand of these blocks per year, patients are very easy to sedate with small amounts of opiates and tranquilizers if the block is good. However, in an inadequate block we often find it rather difficult to restrain their activities, and as they are sedated thalamic type behavior usually manifests itself. I think that Doctor Winnie would also agree with the ease with which the lower roots are excluded from a block if it is done in the method described. Doctor Winnie has described a high and a low method of doing the interscalene block, and if you want to get the ulnar distribution you must insert the needle almost parallel to the long axis of the neck and more caudad. This was his feeling on the matter two or three years ago and it conforms to our experience.

I pass these thoughts along to you not because I wish to interfere with the academic advancement of Doctors Rosenblatt and Cress, but merely to assure you that the Journal with which you spend so much of your time is indeed read critically.

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Author's Reply

Several salient points are raised by Dr. Winchell in his review of the article by Dr. Cress and myself. First, a single case report does not constitute a series and should not be construed as such. The purpose in presenting the case in question was to describe a new and alternative technique for placement of an indwelling brachial plexus catheter. Whether the Seldinger method will prove to be the optimal technique remains to be seen. From a theoretical viewpoint, it appears to offer several advantages over the current technique of catheter placement.

Second, the literature does not substantiate the properties ascribed to the use of 0.5% bupivacaine, 40-50 ml. It is

neither rapid in onset nor is the mean duration of surgical anesthesia routinely 22 hours. Certainly prolonged analgesia will be observed on occasion; however, this is the exception not the rule. While various authors have used and advocated larger dosages of bupivacaine, Albright, in his editorial on bupivacaine's cardiac toxicity,¹ has documented multiple instances of toxic reactions involving bolus injections of bupivacaine in the recommended dosage range. For this reason, I have ceased using bolus injections of bupivacaine and prefer a continuous technique instead. The blood levels produced by a continuous infusion of bupivacaine, as reported by Denson et al.² are well within the safe range.

Third, the incidence of postanesthetic neuritis appears to be reduced by the use of a nerve stimulator when compared to the paresthesia technique. Despite the need to use a large-size needle for placement of a catheter, we have nevertheless encountered no postoperative sequelae.

Finally, I concur with the observation that most patients do not require the administration of a general anesthetic after

only three hours of surgery if adequately medicated. Unfortunately, our patient was a heavy abuser of drugs and was inebriated at the time of surgery. Sedating a patient in a safe manner under these conditions is far more difficult and has not received the attention that this clinical problem warrants.

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References

1. Albright GA. Cardiac arrest following regional anesthesia with etidocaine or bupivacaine. *Anesthesiology* 1979;51:285-7.
2. Denson DD, Raj PP, Joyce TH, et al. Kinetics of continuous epidural bupivacaine infusions. *Anesthesiology* 1981;55:159.

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