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Transient Neurologic Symptoms when Phenylephrine Is Added to Tetracaine Spinal Anesthesia—An Alternative

To the Editor:—The article by Sakura *et al.* regarding transient neurologic symptoms after tetracaine spinal anesthesia with phenylephrine was informative.¹ Why do anesthesiologists add a vasoconstrictor to prolong the duration of the anesthesia? As the authors indicate, "Prolongation is thought to result, at least in part, from a decrease in nerve blood flow resulting in reduced vascular uptake of the local anesthetic."² Thus, more local anesthetic is available for neuronal penetration, causing a more profound and prolonged block. It also is implied that this allows the anesthesiologist to limit the amount of local anesthetic injected, in turn decreasing cephalad spread. But if the vascular absorption of the local anesthetic decreases, is not that the equivalent of injecting more local anesthetic? Because there is an apparent adverse effect of adding phenylephrine to tetracaine spinal anesthesia,¹ why not just inject a little more tetracaine to prolong the anesthesia and omit the phenylephrine?

The Editorial View that accompanied the Sakura paper was confusing.³ Dr. Rowlingson agrees that Sakura *et al.*¹ have furthered our knowledge regarding transient neurologic symptoms after spinal anesthesia. He then goes a step further and states, "Perhaps tetracaine is a better (safer) drug for spinal anesthesia, because compared to lidocaine and bupivacaine it increases spinal cord blood flow." That conclusion, based on one dog study,² is a big leap. Tetracaine, like lidocaine, caused cauda equina syndrome after continuous spinal anesthesia,⁴⁻⁶ and it is neurotoxic to isolated nerve.⁷ Further, compared with bupivacaine, tetracaine is associated with a significantly higher incidence of tourniquet pain during lower extremity orthopedic operations.⁸ It is for these reasons that I do not share or understand Dr. Rowlingson's enthusiasm for tetracaine spinal anesthesia.

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