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REPLY

Dr. Kumar reports a valid method of repositioning an epidural catheter that has entered an epidural vessel. We apply this technique in our practice. We agree with Dr. Kumar on the need to prevent blood clot formation. However, in our case report, a clot formed in the catheter while we were preparing the flush syringe with sterile normal saline. In the event that a clot forms, the catheter may still be salvaged by dislodging the blood clot with reinsertion of the stylet wire.

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Epidural morphine injections for the treatment of postspinal headache

To the Editor:

Postspinal headache (PSH) was first documented by August Bier.¹ In 1898, he reported severe headache following subarchnoid injection of cocaine which was exacerbated by sitting or standing, and relieved by lying down. The incidence of PSH varies between 0.4 per cent² and 70 per cent.³ The most accepted theory of PSH relates it to CSF hypovolaemia, produced by escape of CSF through the dural vent, which deprives the brain of its cushion and places tension on its pain-innervated anchoring structures.⁴

Tourtellotte *et al.*⁵ listed 49 modalities of treatment for PSH, ranging, alphabetically, from an abdominal binder to irradiation of the skull. Even surgical repair of the dural hole was advocated in persistent cases.⁶

Currently, the most accepted mode of therapy for PSH was introduced by Gormley;⁷ autologous blood is introduced into the epidural space in the vicinity of the presumed dural hole, resulting in effective and total relief of headache. However, failure of this mode of therapy was reported recently.^{8,9}

We report six patients (28–70 yr old) with PSH in whom total relief of pain was obtained by epidural injections of morphine via an epidural catheter. Five of the patients developed PSH after surgery using combined

spinal-epidural anaesthesia. The spinal injections were done through a 25-gauge needle. An epidural catheter was left in place for supplemental anaesthesia or postoperative analgesia. Epidural morphine 3.5–4.5 mg was injected postoperatively. On the first postoperative day the patients developed PSH. Another injection of epidural morphine, 3.5–4.5 mg, relieved the pain after 30 min, and the pain did not return. The sixth patient, 28 yr old, underwent an inadvertent dural puncture with a 19G needle used for the introduction of the 25G spinal needle. Thirty-six hours later she developed PSH. An epidural catheter was introduced into the L₂₋₃ interspace, and morphine 3.5 mg was injected through it. After 45 min her headache was relieved. Twenty hours later she complained again of PSH. Another injection of morphine 3.5 mg through the epidural catheter resulted in disappearance of the headache after 45 min, without its return.

There have been several reports of the successful use of epidural morphine after inadvertent spinal tap to prevent post-spinal headache,^{10,11} but this, to our knowledge, is the first report of the beneficial use of this modality after headaches have occurred. The availability of this technique may detract from the reservations of using spinal anaesthesia in young adults. Our experience also challenges the CSF leakage theory of PSH.

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