

## Spinal needle stabilization using a hand locking maneuver with the conventional back-eye combined spinal-epidural set

Dileep Kumar, FCPS · Fauzia Anis Khan, FRCA ·  
Mohammad Hamid, MD

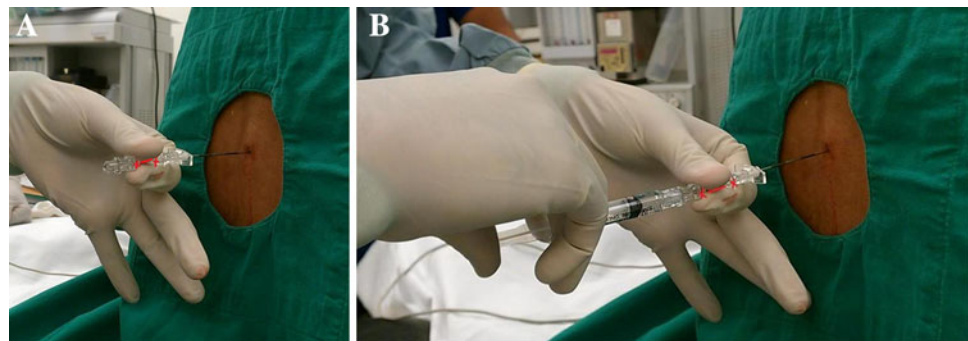
Received: 3 August 2012 / Accepted: 9 August 2012 / Published online: 18 August 2012  
© Canadian Anesthesiologists' Society 2012

### To the Editor,

The popularity of a combined spinal-epidural (CSE) technique is established in modern anesthetic practice. Although CSE has progressed through various modifications since it was first introduced,<sup>1</sup> technical refinement continues. The spinal component of the conventional back-eye CSE kit is challenging because the thin and long spinal needle is not supported by the tissues.<sup>2</sup> This instability may further lead to a repetitive in and out movement of the spinal needle and displacement during syringe fixation, cerebrospinal fluid aspiration, or drug injection.<sup>3</sup> The result can be partial or failed spinal anesthesia, epidural venous puncture, increase in the size of the posterior dural puncture, anterior dural perforation, and nerve damage. A recently introduced ratchet interlocking CSE device has overcome the needle stability issue but at the cost of an inability to feel the dural click or dural perforation, uneasy handling, and damage to the spinal needle tip.<sup>4</sup>

We are using the conventional back-eye CSE set (Espocan® needle; B. Braun, Melsungen, Germany) at our institution. We describe a technique for stabilizing the spinal needle with a hand locking maneuver that allows complete immobilization of the spinal needle throughout the procedure. As the procedure begins and the epidural and subarachnoid spaces are identified, the gap between the hubs of both needles is approximately 1-2 cm and can easily be filled by grasping the exposed part of the spinal needle behind the epidural needle hub with a hand locking maneuver. The left hand index finger and thumb are used to stabilize the needles, and the other three fingers rest on the patient's back, as shown in the [Figure](#), panels A and B. When properly applied, this maneuver prevents forward and backward movement of the spinal needle while the block is being performed and during drug injection. In our experience, this technique is easy to use; it preserves the dural click and may minimize the risk of damaging the tip of the spinal needle.

**Figure** *Panel A:* Hand locking maneuver showing the space between the hubs of the epidural needle proximal to the patient's back and the spinal needle hub. *Panel B:* Hand and needle position during cerebrospinal fluid aspiration and drug injection



D. Kumar, FCPS (✉) · F. A. Khan, FRCA · M. Hamid, MD  
Aga Khan University, Karachi, Pakistan  
e-mail: dkhiloi@gmail.com; dkhiloi@yahoo.com

**Competing interests** None declared.

## References

1. *Chandola HC, Mohamed ZU, Pullani AJ.* Combined spinal-epidural anaesthesia techniques - a review. *Indian J Anaesth* 2005; 49: 450-8.
2. *Cook TM.* Combined spinal-epidural techniques. *Anaesthesia* 2000; 55: 42-64.
3. *Stamenkovic D, Karanikolas M.* Combined spinal epidural anesthesia and analgesia. In: Fyreface-Ogan S, editor. *Epidural Analgesia - Current Views and Approaches*. Croatian: InTech; 2012. p. 115-34.
4. *Puolakka R, Pitkanen MT, Rosenberg PH.* Comparison of technical and block characteristics of different combined spinal and epidural anesthesia techniques. *Reg Anesth Pain Med* 2001; 26: 17-23.