



In reply: Regional anesthesia catheter tunnelling: a simpler approach

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To the Editor,

Tunnelling regional anesthesia catheters: the need for a pre-packaged sterile kit

Creativity and ingenuity are the hallmarks of regional anesthesia that often result in practitioners attempting novel techniques and discovering innovative uses for commonly available equipment. Maguire and Thorleifson¹ offer an excellent alternative technique to our own for tunnelling peripheral and neuraxial catheters. Both techniques, regardless of the specific equipment used, strive to avoid the creation of a skin bridge; however, both techniques require passing a beveled needle adjacent either to the Tuohy needle¹ or to the nerve catheter,² which is an acknowledged risk during most tunnelling procedures.

While Maguire and Thorleifson's proposed method requires sensible procedural steps and equipment, their photos and video were unusual as they depicted the catheter being tunnelled with the same direction of original block needle aiming toward the target neural site instead of typically pointing opposite or away from the block needle projection. Nevertheless, the final tunnelled distance away from puncture site is limited by the length of the intravenous catheter used to create the tunnel. Whereas in the retrograde tunnelling technique utilizing a Tuohy needle, practitioners are able to tunnel further away from the original puncture site. Intravenous catheters longer than 5.25 inches can be challenging to locate. Although this difference is small, it may be clinically important.

Practitioners can employ either technique depending on block site and their specific needs (e.g., caudal catheter may benefit from a longer catheter tunnelling distance to minimize the risk of fecal contamination).

It is not surprising that a ubiquitous “catheter tunnelling kit” has yet to be developed, with the current variability in tunnelling techniques currently utilizing equipment outside of manufacturer-approved use (e.g., guidewires and intravenous catheters). In the absence of such a kit, it can be a challenge to locate additional tunnelling equipment during a sterile procedure. The risk of breaking the sterile barrier is increased with each new item introduced. As a result, both of the discussed methods may paradoxically increase the risk of infection because of the need for extra equipment which is not provided in a single sterile kit. Future improvements in technique and materials should draw from other fields that routinely tunnel catheters such as dialysis catheters^{3,4} and the practice of chronic pain.⁵

In general, the additional time and effort involved in tunnelling catheters, as well as a lack of training and experience, may ultimately discourage practitioners from implementing tunnelling techniques. Nevertheless, as we strive to improve and increase regional anesthesia catheter use, we should continue to explore novel methods for decreasing infection and dislodgement incidences.

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