Insertion of a Lumbar Drain Using a Pediatric Central Venous Catheter Guidewire

To the Editor—A lumbar spinal fluid drain commonly is inserted in an attempt to improve spinal perfusion pressure during thoracoabdominal aneurysm surgery. It is important to pass these drains asatraumatically as possible. However, insertion of such catheters can be difficult.

We use a kit (Codman, Johnson & Johnson, Waltham, MA) that contains a 1.4-G Tuohy needle through which a drainage catheter is inserted. The catheter is soft and flexible, but no guidewire is provided. Insertion of a lumbar drainage catheter into children, most commonly for neurosurgical procedures, often can be accomplished without use of a guidewire. However, in adults, the lack of a guidewire complicates and may preclude placement, because it may be difficult to pass the flexible catheter through the needle.

We have found the use of a 45-cm, 0.021-inch pediatric central venous catheter guidewire (Walrus Medical, Paramus, NV, 07652, MA) to be helpful in the placement of these catheters. The straight end of the wire is inserted into the catheter until the tip of the wire is just at the drainage perforations at the end of the catheter. At this depth of insertion, the J-end of the wire just protrudes from the proximal end of the catheter (fig. 1), which helps to monitor the depth of wire insertion. The increased stiffness this imparts to the catheter permits the drain to pass readily through the needle. We prefer the 0.021-inch wire rather than a 0.025-inch wire, because it sometimes is difficult to remove the tightly fitting 0.025-inch wire without removing the catheter; and there is the danger of the catheter becoming damaged by the tip of the wire. Similarly, to avoid injury to the catheter, we also recommend withdrawing the Tuohy needle from the patient before removing the wire. We have abandoned the use of wires from epidural catheters. These wires are thinner and do not fit snugly into the catheter, which may slide back over the wire during insertion.

The use of a guidewire during lumbar drain insertion allows the possibility of guidewire-induced injury to intrathecal structures. However, as described above, the wire is positioned so that it does not reach the tip of the catheter. This allows for the potential benefit of decreasing the risk of cerebrospinal fluid leak after thoracoabdominal aneurysm surgery and lumbar drainage catheter.

Kenneth J. E.,
Assistant Professor
William T. M.,
Associate Professor
Anesthesiology
Tower 711
Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, MD 21205

Fig. 1. (A) A Codman catheter is depicted with the wire inserted fully and with the wire lying alongside. (B) The proximal tip (patient end) of the wire is magnified, with the external wire lying alongside. (C) The distal tip is magnified, with the external wire lying alongside. The J-end prevents over-insertion into the catheter.

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CORRESPONDENCE

not reach the tip of the catheter. This potential risk must be balanced against the potential benefit of decreasing the incidence of paraplegia after thoracoabdominal aneurysm surgery through use of a lumbar drainage catheter.

Kenneth J. Holroyd, M.D.
Assistant Professor
William T. Merritt, M.D.
Associate Professor
Anesthesiology and Critical Care Medicine
Tower 711
Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, Maryland 21287

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Questionable Effectiveness of Cricoid Pressure in Preventing Aspiration

To the Editor.—Schwartz et al.1 noted that 9 of 12 patients thought to be at risk for aspiration experienced infarctes despite the use of cricoid pressure during intubation. The authors conclude that cricoid pressure "may have decreased the incidence of this complication." This seems like wishful thinking.

Cricoid pressure has been accepted as a standard of care since Sellick’s paper.2 Support for its use comes from cadaver and animal studies3 and intuitive deduction based on the obliteration of the esophageal lumen.4,5 Schwartz et al.’s paper is the first prospective, though uncontrolled, look at clinical outcome. A 75% failure rate just as easily could suggest that cricoid pressure causes aspiration. At the very least, further investigation is warranted.

In today’s litigious atmosphere, mandating a clinically unproven technique as standard of care is not only bad science but bad business.

Steven S. Kron, M.D.
Anesthesiologist
New Britain General Hospital
P.O. Box 2870
New Britain, Connecticut 06050

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