Complication of Continuous Spinal Microcatheters: Should We Seek Their Removal If Sheared?

To the Editor—The use of continuous spinal microcatheters is becoming more frequent. Hurley and Lamberti described their efforts regarding the use of a 27-G microcatheter. In their report they noted an incidence of 2 of 58 microcatheters breaking. No reports or guidelines exist regarding the management of broken microcatheters or whether they should be regarded as different from epidural catheters. Often quoted is the recommendation by Bromage not to attempt surgical removal of a sheared epidural catheter.

In a recent case at our hospital, a patient received continuous spinal anesthesia for a left inguinal hernia repair. Insertion of the spinal catheter (28-G) through a 22-G spinal needle was accomplished using the CoSPAN Continuous Spinal Tray made by the Kendall Company and with the patient in the left lateral decubitus position. At the completion of the surgical procedure, the patient was fully flexed while sitting during removal of the microcatheter. Resistance was met during removal, and the microcatheter broke at the skin level. A second attempt to remove the catheter using a hemostat failed, with the catheter stretching before retracting below the skin line. Portable x-ray of the area was not helpful in locating the microcatheter. The patient was then placed in the prone position on a Wilson frame to facilitate flexion of the lumbar area. After making a small surgical incision, the catheter segment was easily found at the subcutaneous tissue level and extracted without any noticeable traction on the broken catheter segment. The surgical procedure for removing the microcatheter segment lasted less than 5 min.

Fear of catheter breakage or shearing is a major concern when using the newer microcatheters for continuous spinal anesthesia. Baxter reports the shearing of a microcatheter during an attempt to remove it, leaving a 5–6-cm segment of catheter within the patient. The microcatheter was not visualized radiographically, and therefore it was elected not to attempt to surgically locate and extract it.

We believe that an important distinction should be made between sheared epidural catheter tips (which usually are sheared while attempting to withdraw a catheter through the epidural needle) and broken continuous spinal microcatheter segments (which are sheared while attempting to withdraw the catheter after completion of the surgical procedure). In contrast to epidural catheters, the spinal microcatheter segment may still be located partially within the subarachnoid space. Theoretically, this would provide a conduit for continued leakage of cerebrospinal fluid. We believe that a simple surgical attempt to retrieve the microcatheter segment is not unreasonable. Use of a Wilson frame or similar structure facilitates catheter removal by allowing the lumbar area to be flexed.

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REFERENCES


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