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A Broken Epidural Catheter

Case Report

Nelly Moerman 1, T. Porcelijn, and L. Deen

Ein defekter Epidural-Katheter. Fallbericht

Zusammenfassung. Ein Fall eines gebrochenen Epidural-Katheters wird besprochen. Von entscheidender Bedeutung ist die Korrektur der Lendenlordose des Patienten beim Entfernen des Katheters.

Summary. A case is reported of a broken epidural catheter. The importance of the flexed position of the patient's back during the removal of the catheter is discussed.

The use of a catheter during a continuous epidural anaesthetic can cause several complications [3] and breakage of the catheter is one of these. This may be due to imperfections in the material used, external damage, or because the Tuohy needle cuts off a part of the catheter [2]. The catheter can also be crushed between two spinous processes [4] and break. The following case report illustrates the last possibility.

Fig. 1. The broken epidural catheter below in comparison with a normal catheter above

at the last check up, six months after the operation, he had no complaints and no apparent symptoms.

Discussion

It has been shown that catheters in the epidural space can curl up [1, 7] and even tie themselves in knots [6]. Because of this Dawkins advises not to insert the catheter more than 5 cm and Bromage [2] believes that 4 cm is enough. Theoretically, malposition of the catheter in the above patient is a possibility but as the catheter was introduced only 4 cm, the chance that loops or knots could be formed was small.

Kaufman and Reynolds [4] described a patient with an epidural catheter that was passed in the lateral decubitus position with the back well flexed, but when the patient was turned supine the catheter became completely blocked. This block was reversible. A lumbar spine X-ray showed that the block was caused by crushing the catheter between the spinous processes. This also may have occurred in our case.

It is usual with epidural and spinal puncture to

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curve the patient’s back to a maximum, so that the greatest space is achieved between the spinous processes. In this case it is possible that lack of adequate spinal flexion during removal of the catheter caused its constriction. By pulling too hard, the tip of the catheter was broken off. If the patient had curved his back more, the catheter may loosened itself without problems.

Maruyama [5] and Yoshida [8] have recently described 4 patients where difficulties arose during the removal of epidural catheters. These authors also emphasize the importance of the position of the patient. If a catheter is difficult to remove, a maximum curve of the back is required to open the interspaces. As a general rule the catheter should be removed with the patient in the same position as during insertion and a strong force should not be exerted.

References