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Avoiding Intravascular Injections during Epidural Anesthesia

To the Editor: — The recent editorial by Albright provides a timely reminder of the seriousness of the risk of accidental intravascular injection during caudal epidural block. The point is also made that this serious complication can occur following a negative aspiration test.

In a prospective audit of 188 caudal epidural blocks performed at St. Vincent's Hospital, there were 21 (11.2 per cent) bloody taps and one (0.53 per cent) intravascular injection.

As the epidural veins are thin-walled and relatively valveless, a negative pressure can lead to collapse of the vein wall onto the bevel of the needle. This leads to a negative aspiration test.

A test has been evolved to overcome this. Following placement of the needle and aspiration, 2 ml of the local analgesic solution are injected and the syringe removed. After a 15-second delay, the interior of the needle hub is inspected. Blood is easily detected by inserting a wick of absorbent paper or cloth swab into the hub. Any blood staining of the wick is taken as evidence of intravascular placement of the needle. This can often be seen even following negative aspiration.

Finally, the 2 ml volume injected acts as a test dose, as it is sufficient to produce symptoms of mild toxicity when injected intravascularly.

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Reference

1. Albright GA: Cardiac arrest following regional anesthesia with etidocaine or bupivacaine. Anesthesiology 51:285-287, 1979

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A Further Modification of Endotracheal Tubes for Laser Microsurgery

To the Editor: — We have found modification of the endotracheal tube for laser microsurgery of Patil et al., useful in adults. We have added a further modification. This is placing an epidural catheter along side the tube and then wrapping it in muslin. Holes are made along the catheter's distal 4 inches with a needle. A saline-filled syringe is attached to the other end of the catheter. This allows us to keep the muslin moist by injecting 1 ml of saline solution every 5-7 min. This guards against drying out of the muslin in a prolonged procedure.

The muslin does add considerable bulk to the tube. We find this unsatisfactory for children at this time because it permits us to use only tubes of very small diameter. A finer cotton material may work better for children.

For very long procedures, a Harvard pump may be useful for the constant infusion of saline solution although we have not tried this.

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