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A Useful Technique for Teaching Epidural Anesthesia

To the Editor:—Though several techniques are available to identify passage of a needle into the epidural space,[1] the "loss of resistance" method is employed most frequently. The technique, however, is difficult to teach, since the trainer and trainee cannot manipulate the needle simultaneously. We found that a combination of the loss of resistance technique and a MacIntosh balloon can be a most effective teaching device for the beginner.

A MacIntosh balloon and a 10-ml glass syringe filled with 5 ml air are connected to a three-way stopcock. When the epidural needle has been placed in the interspinous ligament, the stopcock is connected to the hub of the needle. The balloon is now inflated with 2 ml air (fig. 1). As the needle is advanced, slight continuous positive pressure is applied to the plunger to prevent deflation of the balloon. At the same time, tremolo pressure is applied to identify the epidural space. As the needle is advanced past the ligamentum flavum, the balloon collapses as the loss of resistance is felt in the syringe, giving visual and tactile evidence that the epidural space has been entered.

Utilizing this combination of indicators has allowed the trainee to control the placement of the epidural needle while the instructor observes its passage into the epidural space. The technique has been employed at this institution for well over a year without difficulty or complications.

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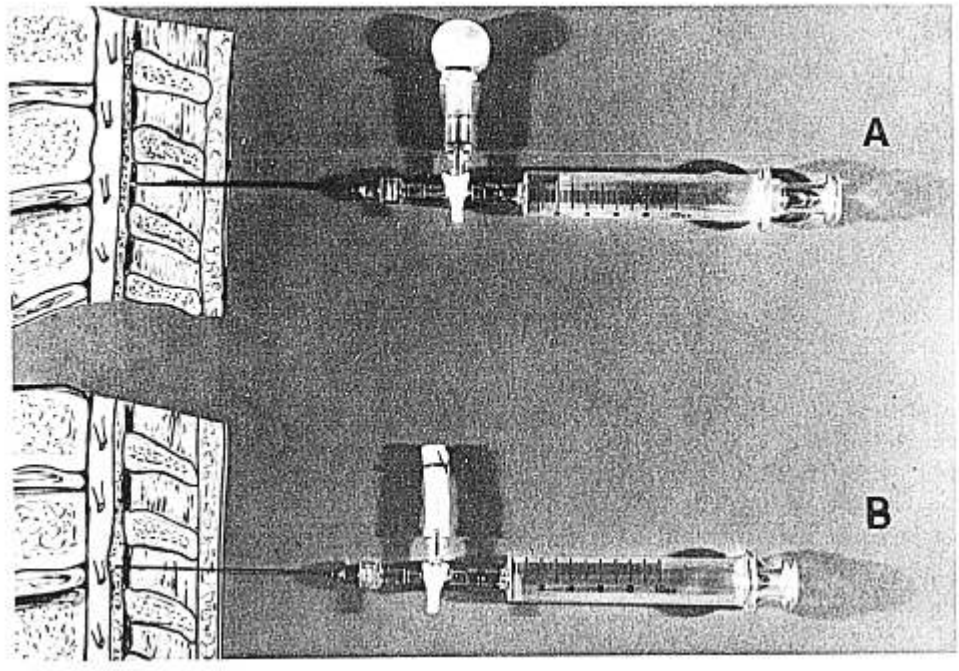

FIG. 1*A*. Needle in the ligamentum flavum—balloon inflated. *B*. Deflation of the balloon and loss of resistance upon entering the epidural space.