

## Correspondence

### Lumbar Puncture Technique for Spinal Anesthesia

*To the Editor:*—For several years I have routinely used a lumbar puncture technique for spinal anesthesia similar to that described by M. J. Frumin, M.D., in the article "Spinal Anesthesia Using a 32-gauge Needle" (*ANESTHESIOLOGY* 30: 599, 1969), except that I have employed a 20-gauge introducer and a 25-gauge inner needle.

As pointed out by Dr. Frumin, "the technique of using a larger needle as the introducer for protecting and directing the inner needle is not novel," but placing the tip of the outer needle deliberately into the epidural space apparently has not become common practice in performing lumbar puncture with the "double needle" technique. The main advantage of inserting the introducer until the tip lies within the epidural space, as identified by the "hanging drop" technique, is that puncture of the dura-arachnoid with the inner needle then becomes a more precisely identifiable act. All damping effects of soft tissue and ligamentous structures which otherwise grip the spinal needle are eliminated and the tactile sensation of piercing the dura-arachnoid with a fine-gauge needle becomes much more pronounced. As the inner needle is advanced through the introducer, there is no resistance until the dura is encountered; then, when steady pressure is applied to the stylet hub of the inner needle, entry into the subarachnoid space is characterized by a distinct "tissue-paper" puncturing sensation. In removing the stylette from the inner needle after puncture of the dura-arachnoid has been detected by this tactile sensation (which frequently also may be visualized as a sudden "jumping ahead" of the spinal needle as it penetrates the meninges and enters the subarachnoid space) great caution must be exer-

cised to avoid dislodgement of the fine lumbar puncture needle, since negligible tissue resistance grips it and it may easily slide within the shaft of the introducer. This may be prevented by fixing the hub of the inner needle to that of the introducer by gripping both simultaneously, not only while removing the stylette from the spinal needle, but also while connecting the syringe and injecting the spinal anesthetic solution. After the anesthetic has been injected, the spinal needle may be withdrawn, while the introducer is left in place with the tip still in the epidural space long enough to observe whether or not cerebrospinal fluid leakage occurs through the meningeal puncture site into the epidural space and out through the introducer. Should there be leakage, a greater likelihood of subsequent post-lumbar-puncture headache might be expected.

The unique feature of Dr. Frumin's technique for spinal anesthesia using a 32-gauge needle is the ingenious design of the special needles to provide even greater precision for lumbar puncture with needles of fine enough gauge to reduce the incidence of post-spinal headache to a new low.

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*Editor-in-Chief's Note:*—Dr. Landmesser describes a commonly used technique of lumbar puncture for spinal anesthesia. We publish his description because of its completeness. This is exactly what we say as we teach the technique to beginners.