Correspondence

The Spinal-needle Director

To the Editor:—Dr. DiGiovanni (ANESTHESIOLOGY 34:88, 1971) is rightly concerned about the poor quality of some disposable spinal needles and the risk of their contributing to contamination of the subarachnoid space.

Following Sir R. MacIntosh's advice,[1] however, the best way to facilitate lumbar puncture, and virtually eliminate the possibility of cellular, bacterial and chemical contamination of the subarachnoid space from the skin, is by the use of a spinal-needle director. This director, ideally, should have a flush-fitting stylet of its own (*e.g.*, Lundy type[2]). If a lumbar puncture is performed through this device, it is unlikely that the spinal needle will ever touch any particles of skin and highly improbable that any will be carried as far as the subarachnoid space.

Epidural analgesia enthusiasts should use an introducer, too, though one large enough to accommodate their 17-gauge Tuohy needles would leave a sizeable hole!

T. S. MORLEY, M.D.
Outer Drive Manor Apt. E-12
23935 West Outer Drive
Melvindale, Mich. 48122

REFERENCES

1. MacIntosh Sir R: Lumbar Puncture and Spinal Analgesia. Edinburgh, E & S. Livingston, 1957
2. Lundy JS: Clinical Anesthesia. Philadelphia, W. B. Saunders, 1942, p 257

To the Editor:—Dr. Morley is absolutely correct when he points out that bypassing the skin would "virtually eliminate the possibility of cellular, bacterial and chemical contamination of the subarachnoid space from the skin." However, there are other tissues beyond the tip of the "director" or "introducer" through which the spinal needle must pass, and these are of a semi-rigid nature similar to the dermis. Coring in these tissues is enhanced by the relative lack of resistance immediately beneath them. I refer specifically to the ligamentum flavum and the dura mater. Plugs of these structures can readily imbed in the lumen of the needle (equipped with a poorly-fitting stylet) as it passes into the epidural or subarachnoid space. It is true that there will be no epidermoid tumor proliferation or bacterial contamination, but the obstructed lumen would prevent ready identification of the epidural or subarachnoid space, which was one of the main points of the original paper.

The spinal-needle director was born in the era before stainless steel, when needles were fashioned of soft, malleable, rustproof metals such as gold, silver, platinum, and platinoiridium. It was later adopted by some anesthesiologists who began to use small-gauge needles (25 to 32 gauge) in an effort to reduce the incidence of postspinal headache.

Dr. Morley rightfully mentions that *ideally* the director should have a flush-fitting stylet. I would declare that flushness should be *mandatory*. A director with a poorly-fitting stylet or no stylet at all is also a potential coring instrument, and the spinal needle with a poorly-fitting stylet can readily impale this impacted core as it passes through the director. Directors now included in disposable spinal trays distributed in this country do not contain stylets, since they were designed to insure proper direction and not as a device to prevent skin contamination.

Finally, as for Dr. Morley's suggestion that an introducer be used in conjunction with a 17-gauge Tuohy needle, I can envision the huge tract that this would make, which would fill with a serosanguineous fluid, a lush medium for bacterial growth and the development of epidurocutaneous fistulas.

What all this discussion finally leads to is the inescapable fact that the real solution to the problem is the assurance of the manufacturer that every needle has a firm, flush-fitting stylet.

ANTHONY J. DIGIOVANNI, M.D.
Department of Anesthesiology
Santa Rosa Medical Center
San Antonio, Texas 78207