Correspondence on BIP Test

1. To the Editor:

I enjoyed reading the BIP test by Carden and Ori describing a modified loss of resistance technique for confirming epidural needle placement (1). In the modern era, even though interventionalists prefer to do all the procedures under fluoroscopy and deliver the medication target-specifically, we still depend on some of the old techniques to get to the target. One of these is interlaminar epidural injections, either in the lumbar epidural space, thoracic epidural space, or cervical epidural space. Since the initial description of Dogliotti (2), numerous techniques have been described to identify the epidural space without using too much air, saline, or contrast (1, 3-9).

Whenever there is false loss of resistance, the BIP test has been extremely useful in deciding whether we need to inject further contrast or look at a different view under the fluoroscopy. As the authors describe, even in an operating room with the use of fluoroscopy, it is extremely valuable. Since the publication of this article, I have heard many anesthesiologists specializing in interventional pain management describe various techniques and some have used similar techniques. However, this is the first time that I am aware of that it has been published as a BIP test. I was certainly not aware of this technique prior to this publication. I have always used either the sodium chloride solution or contrast to evaluate false loss of resistance under fluoroscopy. The BIP test has added another valuable aspect to my technique.

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2. To the Editor:

The small advances in clinical science are often some of the most important to the clinical practitioner and Drs Carden and Ori (1) have made a worthy contribution regarding their modification of the loss of resistance technique in locating the posterior epidural space. A few comments are proffered:

It is noted the authors state the technique "may be used where single shot epidurals are being given without fluoroscopy." This would include the frequently employed non-fluoroscopically guided interlaminar epidural steroid injection. However there are important clinical differences in the administration and subsequent confirmation of the effect of a single shot analgesic/anesthetic and an epidural steroid injection.

The loss of resistance technique is used as an initial approximation of the epidural space for anesthesia/analgesia via single shot and catheter techniques, and