

Identification of the epidural space utilizing continuous pressure measurement with the Compuflow[®] device

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Compuflow is a novel patented computerized device integrating a pressure limited infusion and aspirating system, high and low pressure alarm and a mathematical algorithm capable of calculating a pressure drop through different extension tubing and needles.

This prospective pilot study was designed to evaluate identification of the epidural space utilizing continuous pressure measurement with the Compuflow[®] device.

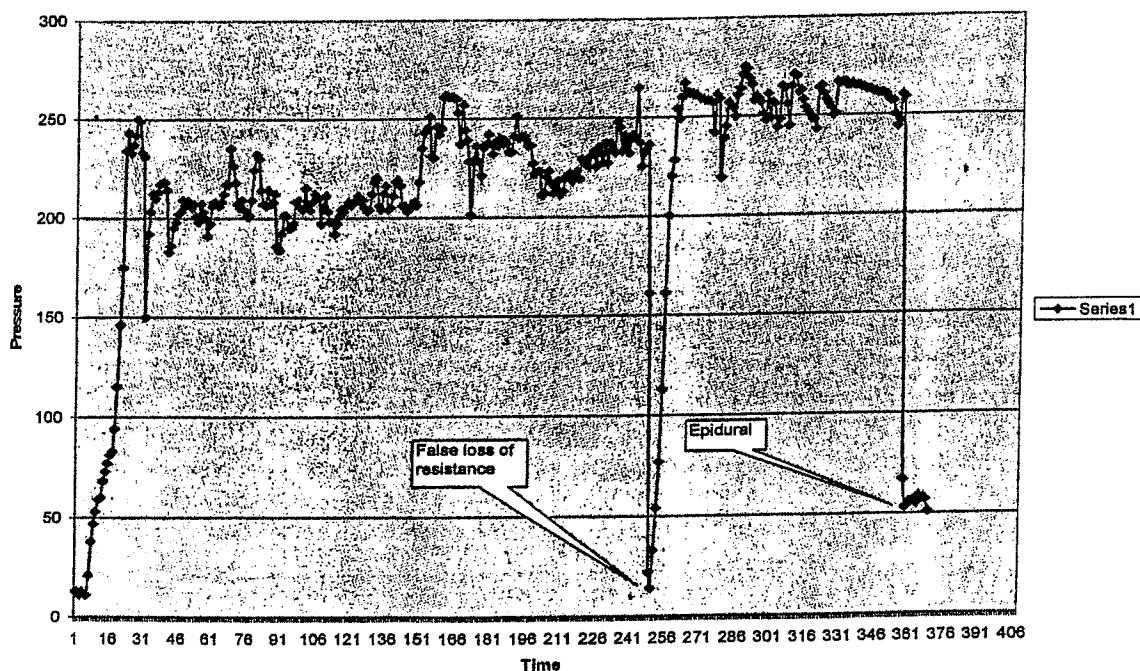
After institutional approval and patient informed consent, a total of 20 consecutive patients, were enrolled in this prospective pilot study.

After local anesthesia, a Tuohy epidural needle was introduced to a depth of 3 cm. The needle was connected to the device set to deliver normal saline at a rate of 0.07ml/sec at a max pressure of 250 mm Hg. The needle was slowly advanced and pressures recorded. A sudden drop in the pressure reading below 100 mm Hg without a subsequent increase in pressure indicated that the epidural space has been reached.

Results:

The epidural space was identified in all patients.

False loss of resistance was easily identified as a temporary pressure drop followed by an increase in pressure.



Lechner TJ et al: Clinical results with the acoustic puncture assist device, a new acoustic device to identify the epidural space. *Anesth Analg*. 2003 Apr;96(4):1183-7

Lechner TJ, van Wijk MG, Maas AJ. Clinical results with a new acoustic device to identify the epidural space.

Anaesthesia. 2002 Aug;57(8):768-72