Epidural space identification using a new device (CompuFlo® Milestone Scientific Livingston NJ) for labor analgesia. Is it worth it? Case report of a Dural tap.

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Background: Many techniques were described to identify the epidural space (ES)¹. The loss of resistance (LOR) techniques, the most frequent, can still be equivocal². New devices were recently commercialized: **COMPUFLO® Milestone Scientific Livingston, NJ** (fig.1), measures and displays pressures while saline is injected by a pressure controlled pump³. The device is connected to the Tuohy needle (TN), placed in the ligamentum flavum (LF). The pump generates an increasing pressure until a maximum. When the needle enters the ES, a drop of pressure to less than 20 mmHg for at least 5 seconds is observed.

Case report : 39-weeks' gestation secundiparous parturient (BMI 21Kg/m²) without risk factors for difficult epidural puncture, asked for epidural labor analgesia. In a sitting position, and after infiltration of local anesthetic in L3-L4, the TN was inserted into the LF and the COMPUFLO® system was connected, following the technical advices of the company. Pressure raised up to 127 mmHg, as the TN advanced, and dropped to 43 mmHg (Fig.2). Since the threshold of 20 mmHg was not reached, like in other patients, we decided to progress the TN, and an additional pressure decrease was recorded. The line was then disconnected to insert the epidural catheter, but **cerebrospinal fluid flowed through the TN**. The TN was immediately removed and a new epidural was performed one space above with no further complications during labour.

References:

- ¹Elsharkawy H, et al. J AnaesthesiolClinPharmacol 2017;33:16-27.
- ²Brogly N, et al.AnesthAnalg 2017; 126: 532-536
- ³Guelber O, et al.Regional Anesthesia and Pain Medicine 2008;33: 346-352.

Discussion: The performance of COMPUFLO was validated in pregnant patients in a pilot study, where mean pressures of ES were described as 8 mmHg (95% CI: 6-11mmHg)³. **This Objective and visual method to identify the ES is attractive, but the safety of this device must be confirmed to recommend it in all pregnant patients**