

## Determination of the median effective dose of chloroprocaine in labour: preliminary results

Anssens, Sarah; De Schepper, E.; Wouters, Patrick; De Hert, Stefan

**Background and Goal of Study:** Chloroprocaine is an old local anaesthetic with renewed interest for its beneficial pharmacodynamic/kinetic profile, which appears particularly suitable for intrathecal analgesia in labour<sup>1</sup>. However, the commonly used dosages are arbitrarily chosen and may be excessive. The primary goal of this study was to determine the median effective dose (ED<sub>50</sub>) of Chloroprocaine when given intrathecally as part of a combined spinal-epi-dural analgesia regimen for labour using an up-and-down method<sup>2</sup>. **Materials and Methods:** In this prospective trial 18 parturients, with a pregnancy duration of 36 to 41 weeks, requesting analgesia, were given a combined spinal-epidural analgesia and received a predetermined dose of chloroprocaine 1% intrathecally, according to an up-down sequential allocation. The initial dose of chloroprocaine was chosen to be 20mg and the testing interval was set at 2mg. Analgesic effectiveness was accepted if the visual analog pain score decreased to 10mm or less on a 100mm scale within 15 minutes. After the study period parturients were offered a conventional patient controlled epidural analgesia protocol with levobupivacaine and sufentanil.

**Results and Discussion:** Using the Dixon and Mood method, the median effective dose of intrathecal chloroprocaine in the spinal component of a CSE for labour was calculated to be 15 mg (95% CI:11.7-18.3 mg).

**Conclusion(s):** To our knowledge, this is the first study to calculate a median effective dose for spinal chloroprocaine for labour analgesia. Further inclusion of patients will allow to refine the confidence intervals.

### References:

1. Columb, O.M., et al. Determination of the minimum local analgesic concentration of epidural chloroprocaine hydrochloride in labor. *International journal of obstetric anesthesia*, 1997. 6: 39-42.
2. Pace N., Stylianu M. Advances in and limitations of up-and-down methodology. *Anesthesiology* 2007.