

Comparison of Analgesic Efficacy of Ropivacaine and Levobupivacaine in Labour Analgesia by Dural Puncture Epidural Technique - A Prospective Double-blinded Randomized Trial

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Abstract : Background: Dural puncture epidural (DPE) technique has been introduced recently for labour analgesia however, no study has compared ropivacaine and levobupivacaine for the same. Methods: The primary aim of the study was to compare time to onset of the Numerical Pain Rating Score (NPRS) ≤ 1 in labour analgesia with both drugs. After obtaining ethics and patient consent, ASA I and ASA II parturient with single foetus in vertex presentation and cervical dilatation < 5.0 cm were included. DPE was performed with 16/ 26 G combined spinal epidural (CSE) technique, and parturients randomized into two groups. In Group R (Ropivacaine) 20 ml 0.125% ropivacaine+ fentanyl 2 μ g/ml was injected to a maximum of 20 ml in 20 minutes and in Group L (Levobupivacaine), 20 ml 0.125% levobupivacaine + fentanyl 2 μ g/ml was injected. Outcomes were assessed at 0.5,2,4,6,8,10,12,14,16,18,20 and 30 minutes, then every 90 minutes until delivery. Appropriate statistical analysis was done, and p value of < 0.05 was considered statistically significant. Results: The median time to onset of NPRS ≤ 1 in both groups was comparable (group R= 16 minutes vs group L= 18 minutes ($p = 0.076$)). Volume of drug for NPR ≤ 1 in both groups was also comparable (Group R 15.95 ± 2.03 ml vs Group L 16.35 ± 1.34 ml ($p=0.47$)). Conclusion: DPE with 16 G epidural needle and 26 gauge spinal needle with both 0.125% ropivacaine and 0.125% levobupivacaine results in similar efficacy of labour analgesia.

Keywords : dural puncture epidural, labour analgesia, obstetric analgesia, hypotension

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