

399. A prospective, randomized, double-blind comparison of isobaric levobupivacaine and isobaric bupivacaine for spinal anaesthesia in inguinal hernia repair

S. Ulukaya, I. Alper, T. Balcioglu, E. Bayraktaroglu, M. Uyar
Ege University School of Medicine, Anaesthesiology and Reanimation, Izmir, Turkey

Background and Aims: Anaesthetic behaviour of isobaric local anaesthetics may change during intrathecal administration due to the relationship between local anaesthetic and cerebrospinal fluid densities. This study aimed to compare anaesthesia quality of isobaric formulation of levobupivacaine and bupivacaine during intrathecal administration for inguinal hernia repair in a prospective, randomized, double-blind design.

Methods: Thirty six adult male were allocated to receive 3 mL of either 0.5% isobaric levobupivacaine (LB, n=18) or 0.5% isobaric bupivacaine through a 25-gauge Quinke spinal needle at the L3-4-5 interspace in sitting position. The pin-prick test for sensory block and modified Bromage Scale for motor blocks were used.

Results: Five patients with LB and four patients with B were excluded from the study and maintained with general anaesthesia via laryngeal mask airway. Remaining thirteen in LB and fourteen in B, respectively were compared and found similar in terms of onset of sensory block (10.5 ± 4.2 vs 9.5 ± 5.6 min) and motor block (3.5 ± 1.7 vs 4.6 ± 2.5 min), times to two segment regressions (137 ± 28 vs 127 ± 21 min) and duration of sensory block (240 ± 110 vs 247 ± 121 min). However the duration of motor block was prolonged in B compared to LB (301 ± 59 vs 249 ± 55 min, $p < 0.05$).

Conclusion: Data may be valuable into two ways. First, levobupivacaine and bupivacaine showed similar actions except from the duration of motor block. In our study, onset of motor block in both groups were shorter than former studies. Second, on considering excluded patients, the success rate with isobaric formulations of levobupivacaine and bupivacaine is not satisfactory for spinal anaesthesia in patients undergoing inguinal hernia repair. It occurs that hypobaric behaviour in supine position might be attributable to motor blocks in the lack of sensory block for both of the drugs.

407. Spinal anesthesia in a patients with spastic cerebral palsy

V. Vrbanovic¹, S. Sakic², S. Jakovina¹, L. Sakic³, K. Sakic¹, A. Bilic¹
¹KBC Zagreb, Anesthesiology, Zagreb, Croatia, ²KBC Zagreb, Ortopaedics, Zagreb, Croatia, ³Student, Zagreb, Croatia

Background and Aims: Effective pain relief is gold standard after surgical correction of orthopaedic patients with cerebral palsy. The aim of this study was to compare the effects of spinal and general anaesthesia on recovery of patients with cerebral palsy with planned surgical correction of locomotor deformation.

Methods: In a randomized-controlled trial from 2000-2005 yr, we enrolled 322 consecutive patients with spastic cerebral palsy undergoing orthopedic surgery. One of the two groups 69/322 middle aged 24years receiving 15 mg of 0.5 % bupivacaine intrathecally (Group I) or general anaesthesia (Group II).

Results: After orthopaedic corrective surgery in spinal anaesthesia, there was no progression of his spasticity, muscle atrophy or no aggravation of autonomic system immediately after the operation, 3 months later and 6 months later, respectively. This cases suggests that spinal anesthesia can be applied in spastic cerebral palsy patients.

Conclusion: Both anaesthetic techniques provided sufficient immediate respiratory function. However, spinal anaesthesia assured better pain control after surgery, less vomiting and pain spasm (hypertonus) of muscle when compared spinal and general anaesthesia.

Reference

Sakić S, et.al. The analysis of walk cycle in patients with spastic cerebral palsy after surgical management on the lower extremity. Coll Antropol. 2007;31(3):781-6.