

ADVANTAGES OF UNILATERAL SPINAL ANESTHESIA VERSUS CONVENTIONAL BILATERAL SPINAL ANESTHESIA IN LOWER LIMB ORTHOPEDIC SURGERY

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Spinal anesthesia is a frequently applied technique for lower limb orthopedic surgery. Hypotension is the most frequent side effect of conventional bilateral spinal anesthesia. An exclusively unilateral block only affects the sensory, motor and sympathetic functions on one side of the body without the typical adverse side effects seen with a bilateral block.

The aim of this prospective, randomized study was to compare unilateral anesthesia versus conventional bilateral spinal anesthesia in lower limb orthopedic surgery according to the quality of sensory and motor blockade, analgesia, hemodynamic stability and side effects.

Forty ASA I – II patients scheduled for lower limb orthopedic surgery were randomly allocated into two groups. Group BS patients received bilateral spinal anesthesia with 3 ml isobaric 0.5% levobupivacaine (conventional dose) and group US patients received unilateral low dose spinal anesthesia with hyperbaric spinal solution (7.5mg of 0.5% levobupivacaine and 40mg of 10% glucose) over a period of 120 seconds and the patients were kept in the lateral position for 15 minutes.

In both groups, the quality of the sensory and motor block was adequate for the surgical procedure. The time to two segment regression of sensory blockade, recovery time of motor blockade, as well as the time of complete recovery was significantly shorter in US group as compared to the BS group. Seven patients in the bilateral, and one patient in the unilateral group developed hypotension that required treatment with ephedrine (Chi-square test 7.02; $p < 0.05$).

Unilateral low dose spinal anesthesia achieves stable hemodynamics. It also results in rapid recovery compared to a bilateral conventional dose spinal anesthesia.

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