ABSTRACT

Background: Regional anaesthesia is the preferred technique for lower abdomen and lower limb surgeries. Ropivacaine being available as isobaric drug in different concentrations and it produces less motor block when used in lower doses and can be very useful for ambulatory surgeries. Objectives: To compare the effect of two concentration (0.5% v/s 0.75%) of Isobaric Ropivacaine in patients undergoing lower limb orthopaedic surgeries regarding sensory and motor block characteristics.

Methodology: A prospective randomized double blind study was conducted on 60 patients of either sex, aged 20 to 60 years and ASA grade I-II scheduled for elective lower limb Orthopaedic surgeries under spinal anaesthesia. Patients were randomly divided into two groups: Group R-0.5 received 2.5ml (12.5mg) of 0.5% isobaric ropivacaine and Group R-0.75 received 2.5ml (18.75mg) of 0.75% isobaric ropivacaine. Onset and duration of sensory-motor blockade and haemodynamic parameters were recorded.

Results: Onset of sensory block (time to $T_o$) was faster in group R-0.75 ($P=0.010$). Onset of motor block was comparable in both the groups. Total duration of sensory and motor blockade were longer in group R-0.75 than in group R-0.5, which was statistically highly significant ($P=0.00$). Demographic data and vital signs were comparable in both the groups.

Conclusion: The present study concludes that 0.75% isobaric ropivacaine was associated with early onset and prolonged sensory blockade with complete motor blockade compared to 0.5% isobaric ropivacaine.

Keywords: Isobaric Ropivacaine, lower limb orthopaedic surgery, spinal anaesthesia.

INTRODUCTION:

Regional anaesthesia is the preferred technique for most of lower abdomen and lower limb surgeries. Intrathecal anaesthesia and epidural anaesthesia are the most popular regional anaesthesia techniques used for lower limb orthopaedic surgeries. With spinal anaesthesia, the onset of anaesthesia is more rapid; allowing the surgical incision to be made sooner and also provides post-operative analgesia. For decades