



Name of candidate: Eman Mohamed Ahmed **Degree:** Master

Title of thesis: The analgesic efficacy of adding magnesium sulfate versus ketorolac to bupivacaine in ultrasound guided supraclavicular brachial plexus block (Randomized double blinded controlled trial)

Supervisors: 1- Ass Prof. Maged Labeab Boules 2- Dr. Safaa Gaber Ragab

Department: Anesthesia

Abstract

Background: SCB has been described as the spinal anesthesia of the upper arm because it offers dense anesthesia of the brachial plexus for the surgical procedures below the arm from elbow to hand.

Objective: to compare the analgesic efficacy when adding magnesium sulfate versus ketorolac as an adjuvant to bupivacaine 0.5% in ultrasound-guided SCB.

Methods: This study compared adding of 24ml of bupivacaine 0.5% to 6ml of magnesium sulfate 10% (n=40) versus 24ml of bupivacaine 0.5% to 2ml of ketorolac 30mg to 4ml normal saline (n=40) for comparing the cumulative morphine consumption needed postoperative in participants aged (18-60) years of (ASA) from I to III scheduled for upper limb surgeries from elbow to hand. They were followed up for the first 24hour postoperative. The primary outcome was the assessment of cumulative morphine consumption at the 1st 24hours postoperatively. Secondary outcomes included NRS scores, hemodynamic parameters intraoperative, opioids related side effects, time to first rescue analgesia, duration of the surgery, and adverse effects related to the block.

Results: : it demonstrates that although the ketorolac group needed less opioids postoperative, but the net result that there was no statistically significant difference between study groups as regards cumulative morphine dose in (mg), and time to first rescue analgesia.

Conclusion: Although the ketorolac group needed less morphine requests, the net results revealed that the two groups were comparable as regards the total opioid consumption for the 24hs postoperative.