Paravertebral Dexmedetomidine in Video-Assisted Thoracic Surgeries for Acute and Chronic Pain Prevention

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Abstract:

Background: Video-assisted thoracoscopic surgery (VATS) is considered as one of the minimally invasive surgeries. Early postoperative pain alleviation is very important to avoid complications, at the same time, proper early pain control is an established fact to decrease the incidence of chronic pain. Objectives: To evaluate the efficacy of thoracic paravertebral block (PVB) by a bupivacaine/dexmedetomidine mixture on acute and chronic post-thoracoscopic surgery pain in patients undergoing VATS. Study Design: A randomized prospective double-blinded trial. Setting: Assiut University Hospitals, Orman Cardiology Hospital. Methods: Sixty adult patients underwent elective VATS surgery under general anesthesia randomly allocated into 2 groups; Group I received thoracic PVB with isobaric bupivacaine 0.5% (0.3 mL/kg) and Group II received PVB with isobaric bupivacaine 0.5% (0.3 mL/kg) and dexmedetomidine (1 mcg/kg). Postoperative pain (at rest, with cough, and with movement) was assessed through a visual analog scale (VAS) every 30 minutes in the first 2 hours, then at the second, fourth, eighth, and 24th hours. Time to first analgesia request and consumption of intravenous rescue analgesia (ketorolac tromethamine 30 mg/dose) was recorded. Follow-up of the patients regarding the incidence of chronic post-thoracoscopic pain by the end of the third and sixth months after the procedure was reviewed through the Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) pain scale.

Keywords:

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