

عنوان مقاله:

Pharmacokinetic Profile of Plasma Levobupivacaine Following Fascia Iliaca Compartment Block for Proximal Femoral Fracture in Older Patient

محل انتشار:

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نویسندگان:

Rebecca Parr - *Institute of Medical Sciences, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK*

Hal Robinson - *Department of Anesthesia, Royal Aberdeen Children's Hospital, Westburn Rd, Foresterhill, Aberdeen, UK*

Gary Cameron - *The Rowett Institute, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK*

Gillian Broadbent - *Institute of Medical Sciences, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK*

.Keith Charlton - *Scotia Biologics Ltd., Polwarth Building, Cornhill Rd, Aberdeen, UK*

Heather Wallace - *Institute of Medical Sciences, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, UK*

Thomas Engelhardt - *Department of Anesthesia, Royal Aberdeen Children's Hospital, Westburn Rd, Foresterhill, Aberdeen, UK*

خلاصه مقاله:

Background: Fascia Iliaca Compartment Block (FICB) is commonly used in older patients to provide effective analgesia following hip fracture. Objectives: However, only limited Pharmacokinetic (PK) data about levobupivacaine are available to help clinical practice and establish safe volumes and amounts of local anesthetics. Methods: Ten patients aged between 53 and 87 years, who underwent hemiarthroplasty following femoral neck fracture were recruited into this study. A fixed volume (40 mL) of 0.25% levobupivacaine was injected before the induction of anesthesia using ultrasound guidance. Venous blood samples were obtained at 0, 10, 20, 30, 45, 60, 75, 90, and 120 min time points and analyzed using mass spectrometry. Results: The median (interquartile range) maximum observed plasma concentration (C_{max}) of levobupivacaine was 0.48 (0.45-0.61) µg/mL, with the time to reach C_{max} (t_{max}) of 38 minutes (30-105) after administration, a half-life of 2.8 h (1.65-5.8), and clearance rate of 0.72 L/min (0.36-1.26). The fixed volume (40 mL) of 0.25% levobupivacaine FICB did not exceed the recognized toxic threshold in adults (2.6 µg/mL). Conclusion: The data described here indicate a similar levobupivacaine PK profile for older patients undergoing FICB for hip arthroplasty compared with the levobupivacaine PK profile for the general population

کلمات کلیدی:

Pharmacokinetics, Levobupivacaine, Local anesthetic systemic toxicity (LAST), Liquid chromatography with tandem (mass spectrometry (LC-MS/MS

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