

Case Report: Amputation

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Background

A 55 yr old man presented with complete painless radial nerve palsy and was found to have a large chondrosarcoma of his right humerus with planned surgical forequarter amputation. Almost all patient will develop phantom limb sensations after an amputation which may or may not be associated with pain (Nikolajsen 2001). Regional anaesthesia has an important role in providing not only acute post-operative pain relief and reducing opiate requirements but as an emerging therapy to prevent phantom limb pain (PLP) (Borghi 2011) and cancer recurrence. We present the anaesthetic and pain management of this challenging patient.

Case Report

The patient was premedicated with 150mg pregabalin after which a US guided single shot interscalene, superficial cervical plexus and paravertebral block at the level of T4 were performed using a total of 30ml 0.25% Levobupivacaine. A multimodal analgesic regime with 1g paracetamol, 40mg paracoxib, 8mg dexamethasone and hourly boluses of 30mg Ketamine were given. At the end of the operation an interscalene and paravertebral catheter were inserted and respective infusions of 5ml/hr 0.2% Ropivacaine with patient deliverable boluses of 5ml and 10 ml 0.25% Levobupivacaine boluses every 12 hours for 2 days. A 14 hr ketamine infusion running at 8mg/hr in addition to regular paracetamol, etoricoxib, pregabalin and twice daily 20mg oxycodone for 48hrs.



References: Borghi, B. *Anesthesia and analgesia*, 2011: 1308-15.
Nikolajsen, L. *British Journal of Anaesthesia*, 2001: 107-16.

Results

Worst pain scores over the first 4 days was 3/10 and no immediate release oxycodone was required until the 5th day when the interscalene catheter became displaced and had to be resited and continued till day 13. the patient was discharged home requiring only oral paracetamol and at 2yr followup has reported no PLP.

Discussion

Limb amputation patients report moderate to severe pain compounded by PLP and is associated with a poor quality of life. We report the use of a multi-modal analgaesic strategy to include the use of an extended regional anaesthesia technique in an attempt to provide acute post-operative pain relief and prevent the occurrence of PLP. The precise aetiology of PLP remains unclear however one of the proposed peripheral mechanism is an increase in peripheral nociceptive input leading to an up regulation of sodium channels which can be blocked by local anaesthetics. Despite our findings the evidence regarding the optimal management of PLP remains inconsistent suggesting the need for larger multi-centre trials to guide the best evidence based practice.

Interscalene Catheter



Paravertebral
Catheter