ROLE OF CONTINUOUS INFRACLAVICULAR BRACHIAL PLEXUS BLOCK in ISQUEMIC PAIN MANAGEMENT

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INTRODUCTION

The most commonly recognized risk factors for the development of compartment syndrome are trauma including fractures, burns, snake bites, crush injuries and gunshot wounds and ischaemia resulting from overtight bandages and arterial occlusion

An infraclavicular brachial plexus block provides effective postoperative analgesia, for upper extremity, below the elbow, and allows anesthesia and analgesia to the musculocutaneous nerve. Chest is the ideal site for catheter placement and fixation because chest wall helps stabilize the catheter and prevents its dislodgment compared with the more superficial location with the interscalene or supraclavicular approaches. This technique is extremely value for procedures that require long and ischemic pain control.

CASE REPORT

A 33-years-old man, ASA I, was proposed for hand and wrist fasciotomy due to compartmental syndrome.

Patient was submitted to surgical correction of distal radius fracture, two months ago. He presented at emergency service with excruciating pain, oedema and functional limitation.

Compartmental syndrome was diagnosed and emergent fasciotomy was performed, under general anesthesia.

After the surgery, ultrasound-guided infraclavicular brachial plexus block was performed. Perineural catheter was placed and continuous infusion (5ml/h) of Ropivacaine 0,2%, using a drug infusion balloon, after an initial bolus of 20ml of ropivacaine 0,375%, was maintained for 6 days.

Patient experienced controlled pain (NRS 0-3/10). On post-operative day 3, Ropivacaine infusion was interrupted and patient complained about intense pain (NRS 5-7/10) with sleep disturbance. Ropivacaine infusion was restarted, with pain relief (NRS 0/10). Hospital discharge took place on post-operative day 6.

Short sensory blockade was noted during infusion and non-motor block occurred.

Sonoanatomy of the infraclavicular block. PM pectoralis major, Pm pect.minor, LC. lateral cord, MC medial cord, PC: posterior cord. Lines represent 85 mm needle paths to LC. MC and PC injection points. Catheter was threaded 4 cms underneath axillary artery (AA) with the tip of the needle positioned at 6 o'clock.

DISCUSSION

Vigorous postoperative analgesia was achieved with continuous infraclavicular brachial plexus block in a patient that suffered a compartmental syndrome. Moreover, catheter fixation was stable, because the range of motion was limited due to the presence of pectoral muscles and because the insertion point was distal to clavicle, avoiding kinking or catheter dislocation associated to neck movements.

This case suggests the effectiveness of continuos infraclavicular brachial plexus block in the control of post fasciotomy pain

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