

Forearm Nerve Catheters For Analgesia After Flexor Tendon Tenolysis

S.T Alagarsamy, John J.

The Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, United Kingdom

Background and aims

Flexor tendon sheath tenolysis of the hand is done to improve motor function of the fingers following contractures. Early active physiotherapy is essential to keep the flexor tendons moving reducing recurrent contractures. Postoperative pain limits flexion exercises. Most patients in our institution receive single shot nerve blocks of the median and ulnar nerves. But these do not provide analgesia beyond 12-24 hours. We describe 3 patients who received continuous median and ulnar perineural infusions.

Methods

All three patients received ultrasound guided single shot blocks of the median, ulnar and radial nerve at the elbow with 5ml 0.5% Bupivacaine each. A sterile forearm tourniquet was used for haemostasis. At the end of the operation a catheter was inserted close to the ulnar and median nerve at the mid forearm level using ultrasound. The catheters were connected to a portable pump set to deliver 5ml/hr of 0.25% Bupivacaine infusion with a patient controlled bolus of 5ml as required. Infusion was continued for 3 days.



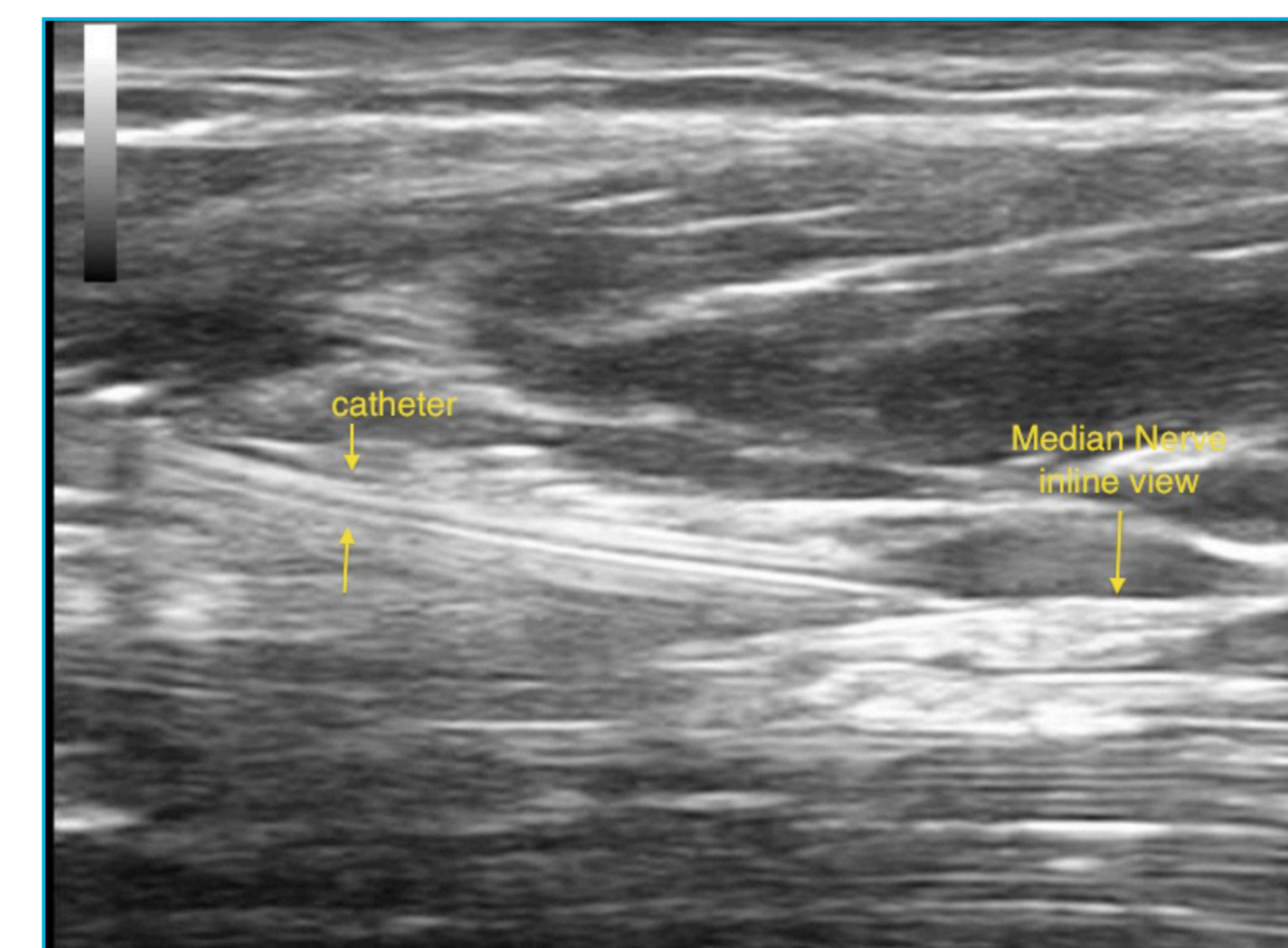
Pictured Left: Nerve Catheter

Results

None of the patients needed a GA. Postoperative VAS pain scores on movement remained less than 2/10 all throughout. Active flexion of the finger joints was possible throughout 3 days of the infusion. Flexion was maintained on the 4th day too after the catheters were removed. Surgical results remain excellent at 6 week follow up.

Conclusions

Continuous blockade of the median and ulnar nerves at midforearm level can provide high quality long term analgesia for the hand. Blockade of the peripheral nerves at this level maintains motor power in the forearm flexor muscles while providing complete analgesia to the hand. Active physiotherapy sessions can be started almost straight after surgery. Avoiding a general anaesthetic and a brachial plexus block enables patients to see the surgical result before the bandages are applied, thus providing a psychological boost to their rehabilitation.



Pictured Left: Median Nerve Catheter