Selective Infraclavicular Brachial Plexus Phenol Injection for the Relief of Cancer Pain

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INFRACLAVICULAR palliative neurolytic blockade of the brachial plexus requires precise localization of the cords in relation to the axillary artery. Below the clavicle, as it passes over the first rib, the brachial plexus is positioned cephalad and anterior to the artery. As it continues distally toward the coracoid process, the cords assume the classic orientation of medial, lateral, and posterior positions around the artery (fig. A; solid line indicates probe orientation for fig. B and dashed line for fig. C). This report illustrates the feasibility of ultrasound localization and targeted phenol injection of the lateral or posterior cords just below the clavicle for palliative pain relief.

A 56-yr-old female with a nonresectable soft-tissue sarcoma in the right biceps muscle presented with burning pain in her upper arm despite methadone and fentanyl patient-controlled analgesia (500 μg q 15 min, 600 μg prn). In the medial infraclavicular region, the transducer was positioned in a sagittal plane perpendicular and caudad to the long axis of the clavicle (Oval inlet). Figure B depicts a typical sonograph of the brachial plexus in a transverse cross-section between the axillary artery and the clavicle beneath the pectorals muscles. To preserve wrist motor function, 5 ml of 6% aqueous phenol was injected in the lateral cord, but resulted in only a 50% reduction in pain (fig. C, asterisk).

An additional injection of 5 ml 6% aqueous phenol targeting the posterior cord (fig. C, double asterisks) produced 100% pain relief with complete loss of upper extremity proprioception and motor function. She was discharged home pain free, and no immediate or short-term complications were reported.

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Competing Interests
The authors declare no competing interests.

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