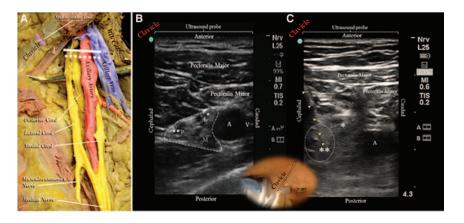
Charles D. Collard, M.D., Editor Alan Jay Schwartz, M.D., M.S. Ed., Associate Editor

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

Antoun Nader, M.D., Mark C. Kendall, M.D.



NFRACLAVICULAR 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).² 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 μ g q 15 min, 600 μ g 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).³

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.

Acknowledgments

The authors thank Naveen Nathan, M.D., Northwestern University, Feinberg School of Medicine, Chicago, Illinois, for his assistance with image preparation.

Competing Interests

The authors declare no competing interests.

Correspondence

Address correspondence to Dr. Kendall: m-kendall@northwestern.edu

References

- 1. Akkaya T, Unlu E, Alptekin A, Gumus HI, Umay E, Cakci A: Neurolytic phenol blockade of the obturator nerve for severe adductor spasticity. Acta Anaesthesiol Scand 2010; 54:79–85
- 2. Neal JM, Hebl JR, Gerancher JC, Hogan QH: Brachial plexus anesthesia: Essentials of our current understanding. Reg Anesth Pain Med 2002; 27:402–28
- 3. Orebaugh SL, Groen GJ, Bigeleisen PE: Ultrasound-guided infraclavicular block, Ultrasound-Guided Regional Anesthesia and Pain Medicine, 3rd edition. Edited by Bigeleisen PE. Philadelphia, Lippincott Williams & Wilkins, 2012, pp 58–64

From the Department of Anesthesiology, Northwestern University, Feinberg School of Medicine, Chicago, Illinois (A.N., M.C.K.). Copyright © 2014, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved. Anesthesiology 2015; 122:1153