

## **2003 Spring A69**

### **At the cords, the pinkie towards**

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**Introduction:** Brachial plexus blockade for hand surgery on the level of the cords is usually done via the infraclavicular approach. To be successful, this approach requires that at least two of the three cords be blocked at this level, but identification of the different muscle twitches elicited when the different cords are stimulated, pose problems to trainees and experienced regional anesthesiologists alike. This communication describes an easy way to teach and remember the different muscle twitches elicited by stimulation of the different cords.

**Methods:** Stimulation of the lateral cord causes flexion at elbow and pronation of the forearm due to contractions of the biceps and pronator teres muscles. Other superficial flexor muscles of the hand will also contract as will the first and second lumbrical muscles and the adductor polices brevis, opponens polices and the flexor polices brevis muscle. The net effect of this is hand twitches and it will appear as if the fifth finger (the pinkie) is moving laterally with the muscle twitches (pronation of the forearm) when the arm and hand is held in the anatomical position. Stimulation of the posterior cord, on the other hand, will cause muscle twitches mainly of the extensor muscles of the hand, while medial cord stimulation will cause the deep flexors of the hand to twitch.

**Results:** We found it easy to teach (and for ourselves to remember) these muscle twitches, if we looked at the pinkie when the arm is positioned in the anatomical position. The pinkie moves laterally (pronation of the forearm) when the lateral cord is stimulated. If the pinkie moves posteriorly (extension), the posterior cord is being stimulated and if it moves medially (flexion), the medial cord is being stimulated. The pinkie thus always moves “towards” the cord that is stimulated.

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