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### Not documented? Not done! A proposed procedure note for peripheral nerve blocks

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It has been our practice to use an interscalene block of the brachial plexus for patients undergoing shoulder arthroscopy with acromioplasty and rotator cuff repair. While some patients receiving a short-acting block experience pain shortly after completion of the surgical procedure, patients receiving an intermediate- or long-acting block have found prolonged numbness of the upper extremity unpleasant. We have therefore been looking for an alternative means to provide postoperative analgesia.

As a pilot study, five patients undergoing outpatient arthroscopic acromioplasty and rotator cuff repair received a combination of a short-acting interscalene block (using mepivacaine) and a long-acting suprascapular nerve block (using bupivacaine). They were seen in the PACU one to two hours after surgery and were found to have recovered at least partially motor and sensory function of the upper extremity, while reporting VAS scores of 2 or less. They were interviewed by telephone 48 hours after surgery and reported VAS scores consistently less than 4 with a complete recovery of motor and sensory function before being discharged home on the day of surgery.

The suprascapular block was first described in 1941 by Wertheim and Rovenstine<sup>1</sup>. Its has been used to treat chronic shoulder pain, frozen shoulder, scapular fracture and postoperative pain after surgery under general anesthesia<sup>2</sup>. The suprascapular nerve has been shown to innervate 70% of the shoulder joint in addition to the scapular spine and part of the acromioclavicular joint<sup>3</sup>. It provides little or no innervation to the skin, and thus cannot be used as a sole anesthetic modality for surgery. Various techniques for suprascapular nerve block have been described besides the classic approach, in which the needle is aimed in a postero-anterior fashion at the suprascapular incisure. This approach has been criticized for a risk of causing suprascapular nerve entrapment and for a possibility of pneumothorax. Safer techniques consist either in blocking the nerve more proximally or in injecting local anesthetic in the floor of the supraspinous fossa, either blindly or by locating the nerve with a nerve stimulator and eliciting an infraspinatus motor response, which is the method we used.

Our limited data suggests that the combination of a long-acting suprascapular nerve block with a short-acting interscalene block may provide adequate pain relief after arthroscopic shoulder surgery while allowing early motor and sensory recovery, thus leading to higher patient satisfaction. A randomized controlled trial comparing intermediate-acting interscalene block with the combination of long-acting suprascapular nerve block and short-acting interscalene block is planned.

#### References:

1. Wertheim H and Rovenstine EA. Suprascapular nerve block. *Anesthesiology* 2, 541-545. 1941.
2. Ritchie ED et al. Suprascapular nerve block for postoperative pain relief in arthroscopic shoulder surgery: a new modality? *Anesth Analg* 84 (6), 1306-1312. 1997.
3. Aszmann O et al. Innervation of the human shoulder joint and its implications for surgery. *Clin Orthop* 330, 202-207. 1996.