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An Evaluation of Complications Following Ultrasound Guided Regional Block Anesthesia in Outpatient Hand Surgery

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SI HS Abstract
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An Evaluation of Ultrasound-Guided Regional Block Anesthesia in Outpatient Hand Surgery

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Introduction: The utilization of ultrasound-guided peripheral nerve blocks in orthopedic surgery has increased in popularity as the anesthesia of choice for the management of perioperative pain. Peripheral nerve blockade has been shown to increase overall surgical efficiency, improve patient satisfaction, reduce postoperative narcotic use, and decrease the duration of facility admissions, while increasing overall cost-effectiveness. To date, scant literature exists regarding the safety and efficacy of ultrasound-guided supraclavicular blocks used in common hand surgery procedures, and the rate of neurologic and vascular complications remains unknown.

Objective: The purpose of this study was to examine the effectiveness and complication rate of supraclavicular nerve blocks in hand surgery.

Methods: With institutional review board approval, 713 cases of outpatient upper extremity surgery, performed by three board certified orthopedic hand surgeons at a single ambulatory surgery center over a consecutive period of 2 years, were retrospectively reviewed. Adverse outcomes related to regional blocks were identified through reviewing the electronic medical

record of the immediate 24-hour postoperative telephone call and the first postoperative visit note within two weeks of surgery.

Results: 20 patients (2.8%) reported an excessively long block and 1 patient reported inadequate pain control in the PACU (0.1%), but no clinically significant pulmonary or neurovascular complications were identified.

Conclusion: Ultrasound-guided supraclavicular block was associated with a high success rate and low complication rate. This technique as described may be safe for outpatients, although larger numbers of subjects will be required to make this statement with certainty.