

## Regional Blockade of the Brachial Plexus: Approaches and Outcome

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The presentation was designed to give an overview of brachial plexus anesthesia and analgesia, including anatomy, approaches, and outcomes of the most common techniques for blockade of the plexus. Anatomy and approaches to the brachial plexus will be reviewed, including interscalene block, supraclavicular block, infraclavicular block and axillary block. The lecture will present the current literature regarding upper extremity anesthesia and analgesia to help guide evidence-based practice. The criteria for assessing the quality of studies were based on the Jadad score and a grade recommendation was assigned based on the US Agency for Health Care Policy and Research, which uses the quality and number of studies supporting individual outcomes to determine the grade. Randomized controlled trials were reviewed that compared the neurostimulation technique to ultrasound-guided brachial plexus blockade. Good evidence supported higher success rate with ultrasound-guided blocks. There was good evidence that supported faster onset of sensory blockade with ultrasound. There was fair evidence that supported improved performance time with ultrasound. There was no evidence that showed any difference in major complications when comparing the neurostimulation technique to ultrasound-guided blockade of the brachial plexus. Randomized controlled trials were reviewed that compared the supraclavicular, infraclavicular and axillary approaches. The supraclavicular block had a lower success rate due to failure to anesthetize the lower trunk of the brachial plexus. In addition, the supraclavicular block had a higher incidence of Horner's syndrome and hemidiaphragmatic paresis when compared to the infraclavicular and axillary approaches to brachial plexus blockade.

### Biography

Clifford Bowens completed his medical training at Duke University School of Medicine in 1993. He served in the United States Navy as a General Medical Officer, earning the rank: Commander, Medical Corps. Dr. Bowens completed his residency in Anesthesia at Penn State Hershey Medical Center, and is presently an Assistant Professor in the Department of Anesthesiology, Vanderbilt University School of Medicine. He serves as the Medical Director, Orthopedic Anesthesia, and has published several journal articles and book chapters.

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