

Anesthesiology Rounds
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Ultrasound-guided Brachial Plexus Anesthesia

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Objectives:

- To describe the benefits of ultrasonic guidance (USG) in brachial plexus blocks.
- To give an overview of brachial plexus echoanatomy.
- To present a summary of USG interscalene, supraclavicular, infraclavicular, axillary and peripheral block techniques.
- To guide the reader towards more detailed information sources.

Questions (only 1 answer is correct)

1. Which of the following statements is true?

- a) When a stimulating needle is placed immediately adjacent to a motor nerve, an evoked response is always seen.
- b) Sedation during neurostimulator-guided blocks is useless.
- c) Neurostimulation has eliminated pneumothorax as a complication of brachial plexus blocks
- d) Concomitant neurostimulation may decrease the success rate of ultrasound-guided (USG) infraclavicular block.

2. Which of the following statements is true?

- a) Higher probe frequencies produce images with higher spatial resolution
- b) Higher probe frequencies allow better visualization of deeper structures
- c) Probe frequency is the only determinant of image quality
- d) Linear probes cannot be used for USG plexus blocks.

3. Which of the following statements is true?

- a) A randomized, controlled study has demonstrated the superiority of USG interscalene blocks
- b) A randomized, controlled study has demonstrated the superiority of USG supraclavicular blocks
- c) A randomized, controlled study has demonstrated the superiority of USG axillary blocks
- d) USG has not been demonstrated to be superior to neurostimulation

4. Which of the following statements is true?

- a) In USG infraclavicular block, injection of the local anesthetic anteriorly to the axillary artery guarantees success
- b) In USG infraclavicular block, injection of the local anesthetic circumferentially or in a posterolateral "U" around the axillary artery is recommended
- c) Combining neurostimulation with USG increases infraclavicular block success rates
- d) USG infraclavicular blocks are poorly tolerated by patients

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