

Supraclavicular Catheter Placement in a Patient with a Cervical Rib

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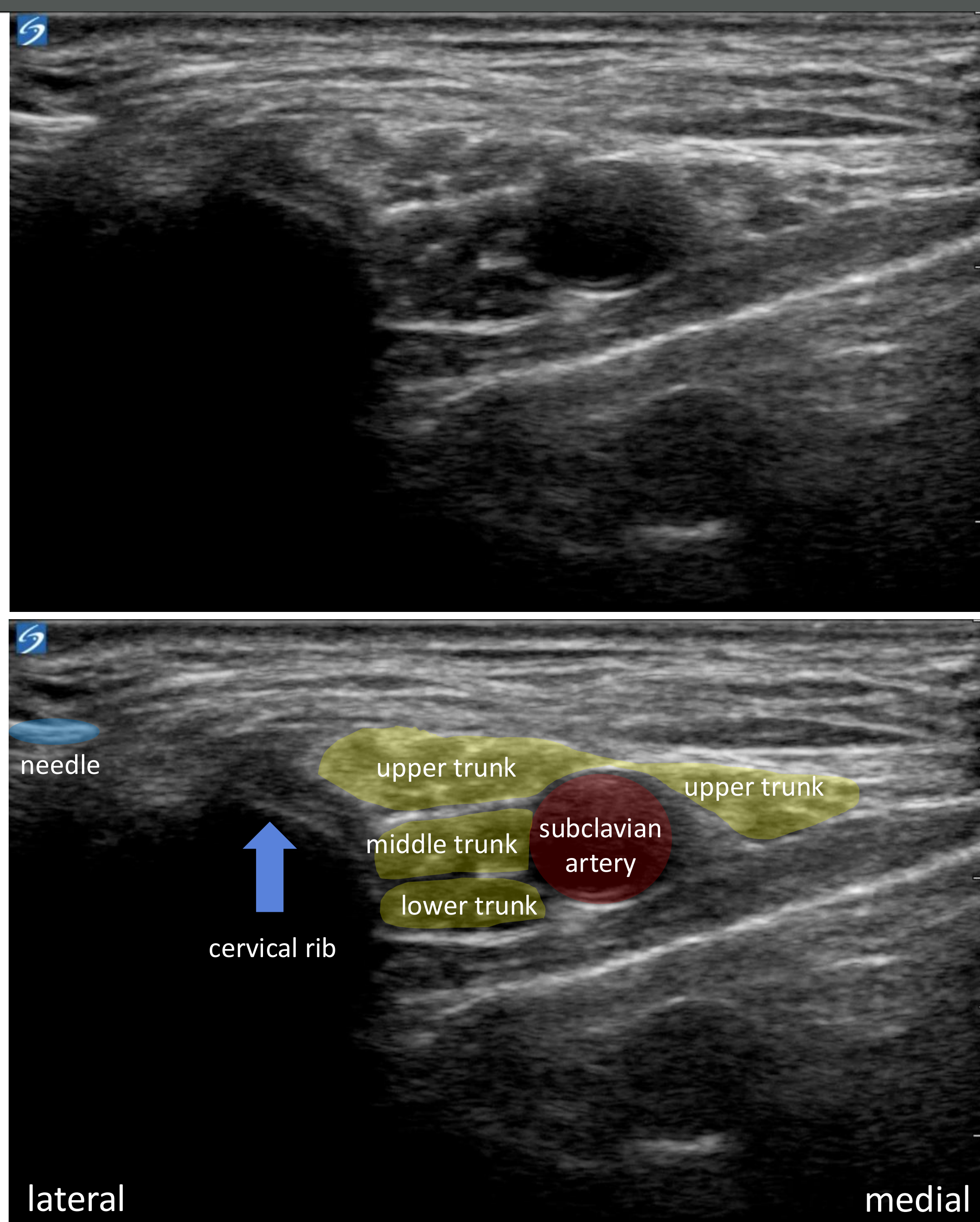
Background

- Cervical ribs arise from the seventh cervical vertebra and may attach to the first rib or terminate in the soft tissue
- Due to a congenital abnormality
- Prevalence in the healthy population is approximately 1% [1]
- Often clinically irrelevant and found incidentally, but can cause neurovascular compressive symptoms

Case Presentation

- 75-year-old female presenting for an open reduction and internal fixation of a left distal humerus fracture
- No significant past medical history
- Physical exam
 - Intact sensation and motor function of the left upper extremity
 - Significantly limited shoulder mobility due to pain precluding infraclavicular approach
- Anesthesia plan: general anesthesia + supraclavicular catheter for analgesia

Images



Figures 1a and 1b. Ultrasound image showing the brachial plexus in relation to the cervical rib

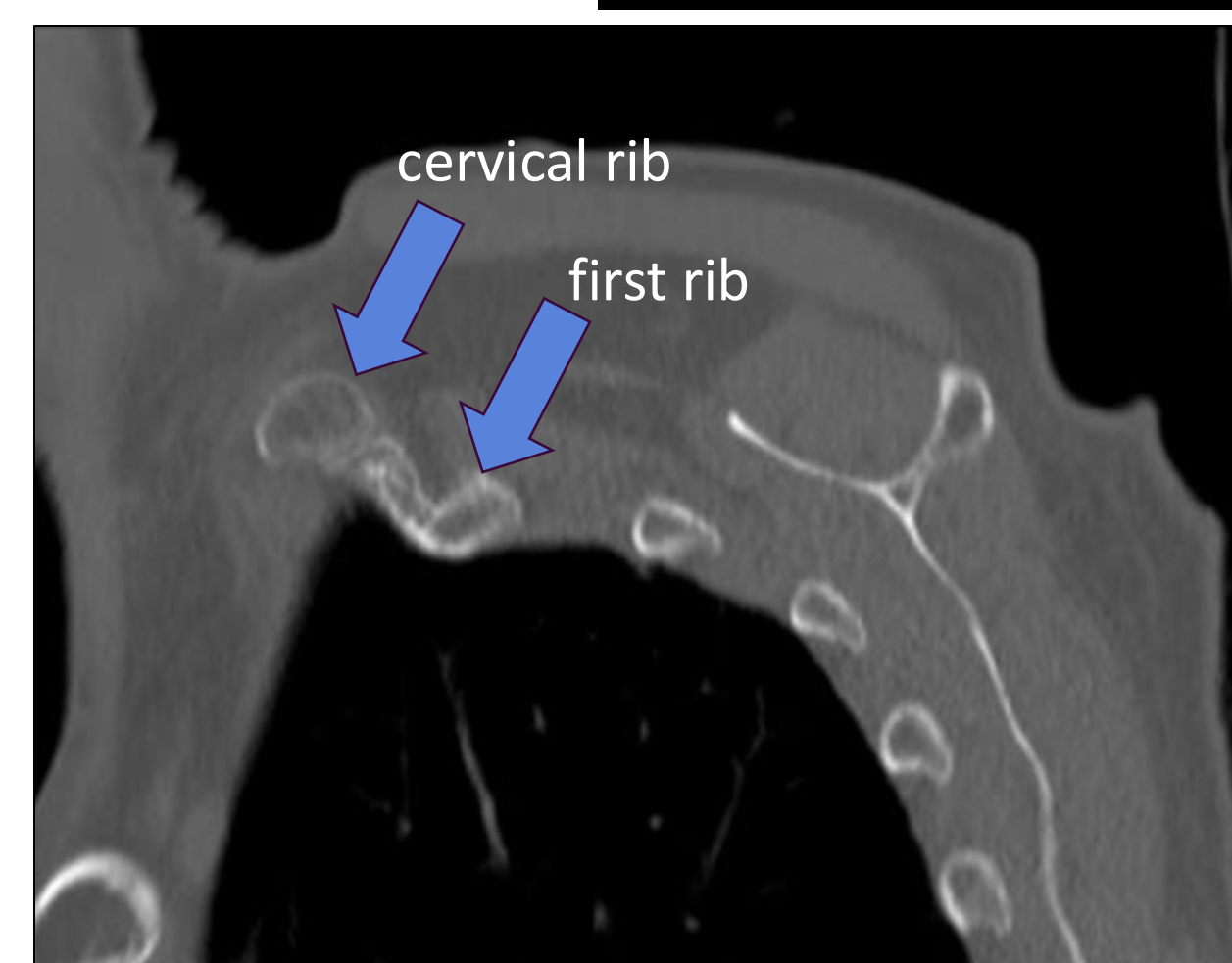


Figure 2. Sagittal view of computed tomography scan showing the cervical rib attaching onto the first rib

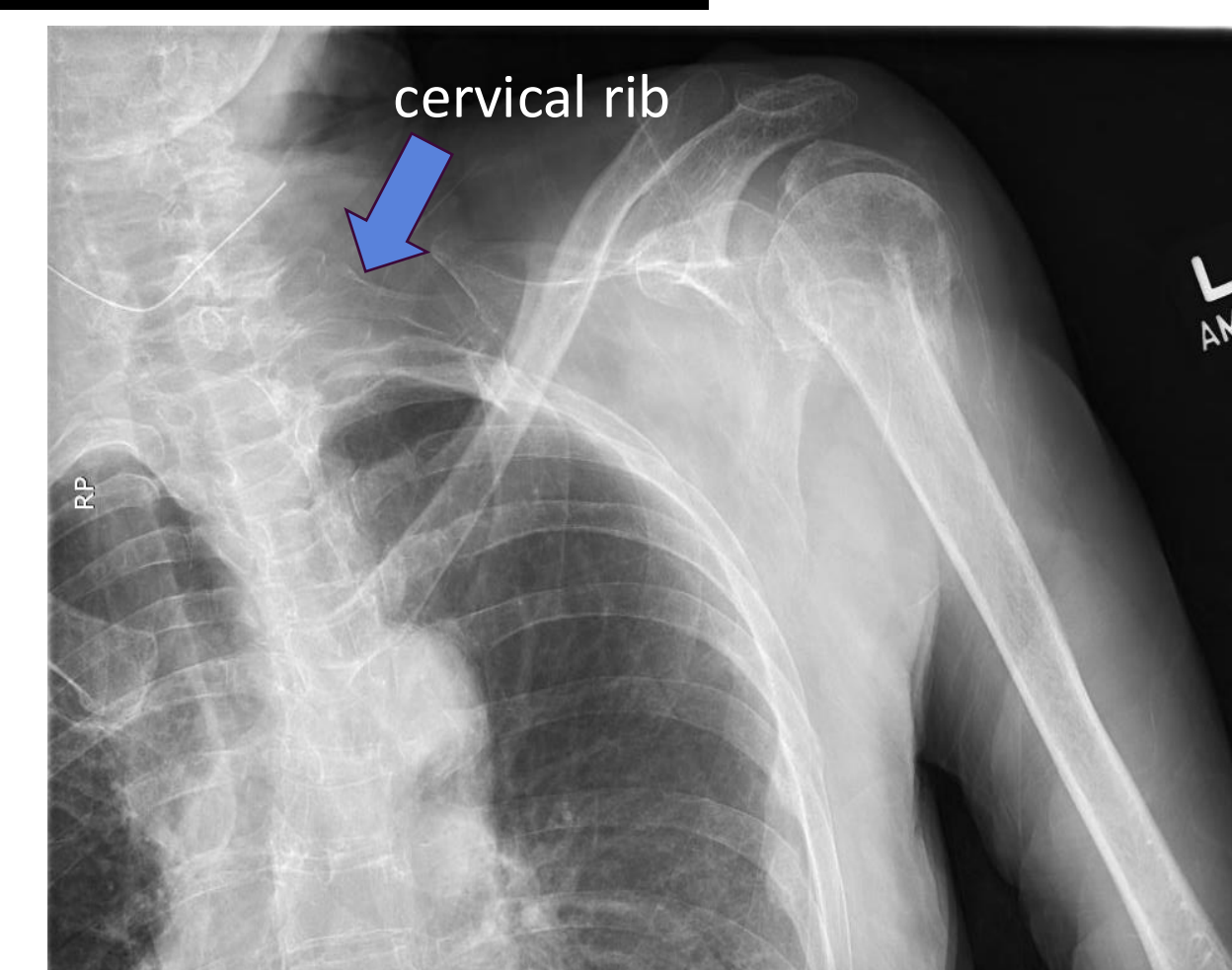


Figure 3. Radiograph of left shoulder showing the cervical rib

Perioperative Course

- Catheter placed between upper and middle trunks to avoid pleura unprotected by aberrant first rib
- Pain well controlled in PACU
- Discharged with ON-Q pump containing 0.2% ropivacaine
- On postoperative day four (one day after catheter removal), had return of sensation and motor function

Discussion

- Case reports of 7 patients with incidentally found cervical ribs when scanning for supraclavicular blocks [2, 3, 4, 5]
- Course of the brachial plexus around a cervical rib is highly variable and morphology of first rib may be distorted
- Important to ask about neurologic symptoms, especially since the brachial plexus may be stretched around a cervical rib

References

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5. Liu, M. and P. Peng, Supraclavicular Brachial Plexus Block in the Presence of a Cervical Rib. *Anesthesiology*, 2017. 126(5): p. 979.