

Introduction

- The interscalene block is a common technique for postoperative analgesia for shoulder surgery but is associated with hemidiaphragmatic paralysis especially in patients with obesity or respiratory comorbidities^{1,2}.
- One method of minimizing diaphragm paresis is performing blocks more distal along the brachial plexus to increase the distance from the phrenic nerve³.
- Performing an anterior suprascapular nerve block has been shown to provide noninferior analgesia and preserve lung function when compared to the interscalene block after major arthroscopic shoulder surgery⁴.

Case Presentation

- 73 year-old 116 kg (BMI 44 kg/m²) female with history of CPAP dependent OSA presented for outpatient right shoulder arthroscopy for repair of recurrent rotator cuff tendon tear.
- A year prior, she presented for repair of a rotator cuff tendon tear on the same shoulder. For that case, an interscalene nerve catheter was placed with an initial bolus of 100mg of 0.5% ropivacaine and connected to a continuous infusion of 0.2% ropivacaine at a rate of 6 mL/hour with a 3 mL/20 minute patient controlled bolus.
- In PACU, she had significant hypoxia ultimately requiring an unplanned two night hospital admission.
- She was unable to wean oxygen therapy until after her nerve catheter was clamped on postoperative day one. The catheter was then removed and her pain was managed with oral opioids (75mg oxycodone total) and intravenous NSAIDs.

Post operative course

- She now presented for repair of recurrent rotator cuff tendon tear.
- Placed an anterior suprascapular nerve catheter for postoperative analgesia. It was placed with an initial bolus of 75mg of 1.5% mepivacaine and connected to a continuous infusion of 0.2% ropivacaine at a rate of 2 mL/hour with a 3 mL/20 minute patient controlled bolus.
- In PACU, she was successfully weaned to room air and discharged home.
- During her postoperative course at home, she reported minimal pain scores, maintained SpO₂ >94%, and only required 10mg oxycodone. The catheter was removed on postoperative day four.

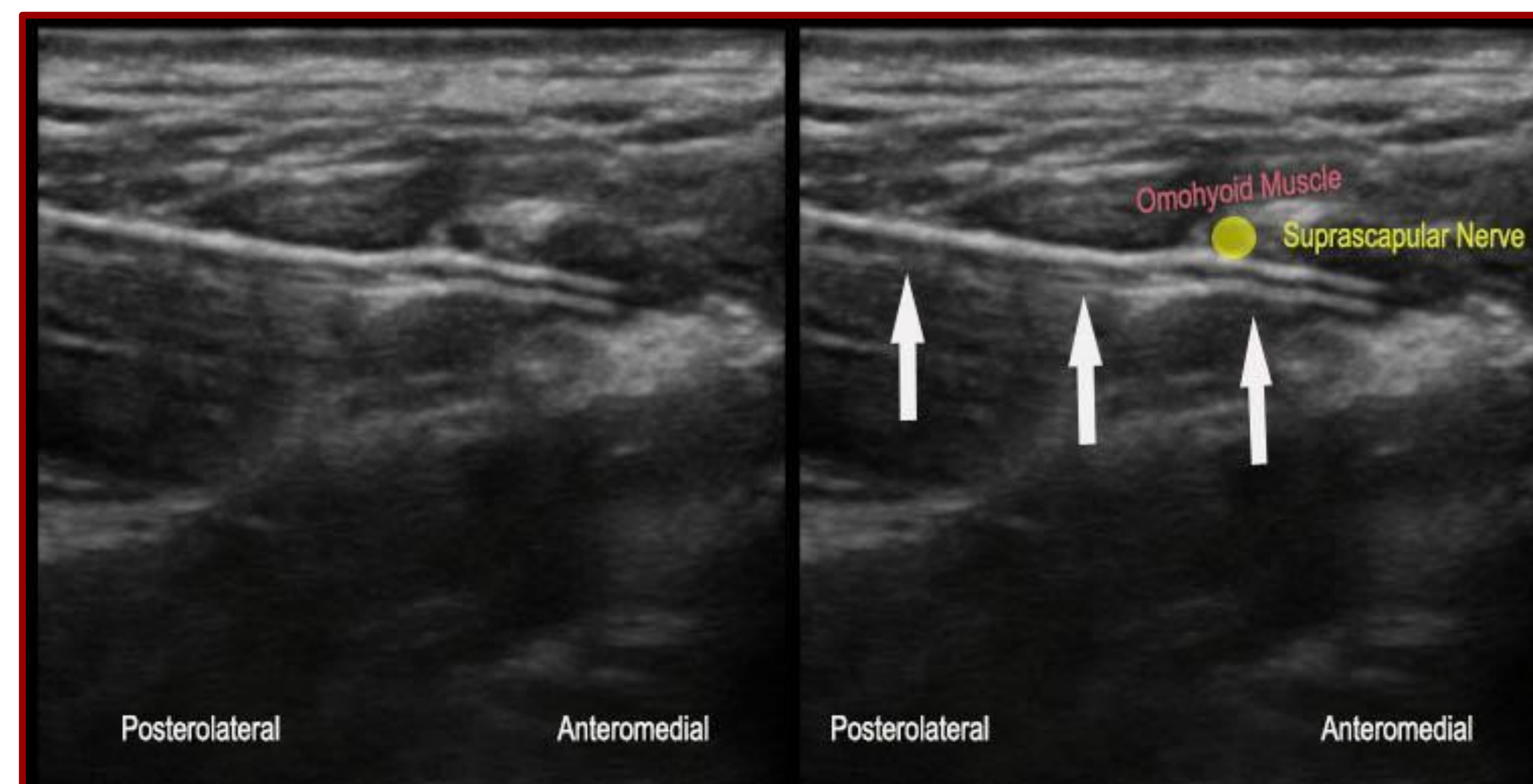


Figure 1: Tuohy needle seen immediately beneath or caudal to the suprascapular nerve as it branches away from the superior trunk.

REFERENCES

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4. Auyong DB, Yuan SC, Choi DS, Pahang JA, Slee AE, Hanson NA: A double-blind randomized comparison of continuous interscalene, supraclavicular, and suprascapular blocks for total shoulder arthroplasty. Reg Anesth Pain Med 2017; 42:302-9

Discussion

- This case highlights the clinical benefits of a continuous anterior suprascapular nerve block in a patient who is at high risk of respiratory compromise from phrenic paralysis.
- This patient had the same surgery, same laterality, one year prior highlighting the very different postoperative clinical outcomes between an interscalene block and an anterior suprascapular block.
- Her first procedure performed with an interscalene catheter required an unexpected three day admission for iatrogenic respiratory failure secondary to diaphragmatic hemiparesis requiring high opioid use for analgesia after block resolution.
- In contrast, her second procedure was completed without clinical dyspnea and she was discharged home from PACU with minimal opioid use over four days.
- We attributed this clinical difference to the use of a phrenic nerve sparing anterior suprascapular nerve block during the second procedure.

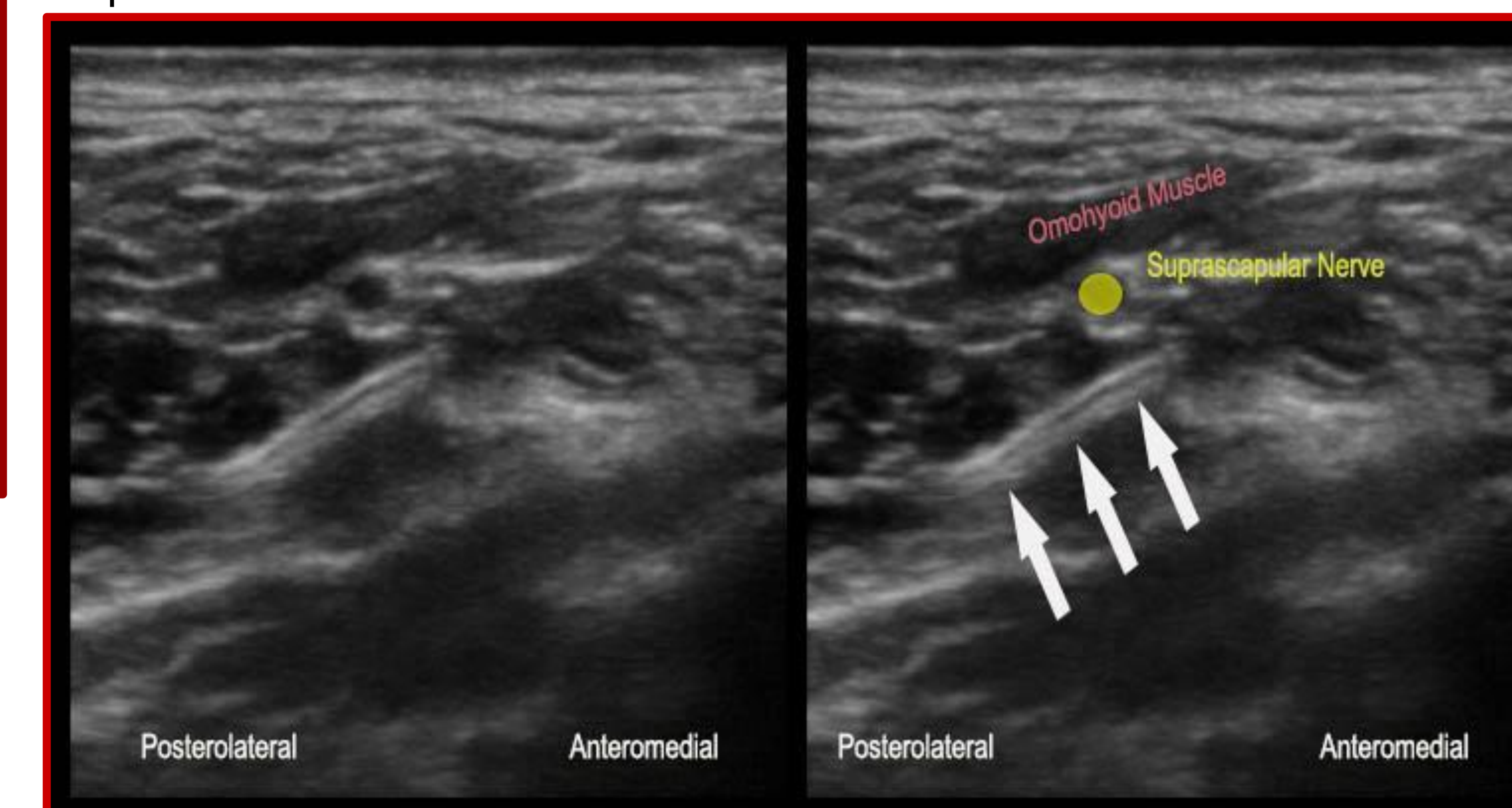


Figure 2: A wire-reinforced catheter is placed immediately beneath or caudal to the suprascapular nerve. Repeat small boluses are given while removing the Touhy needle to verify the catheter has not shifted.