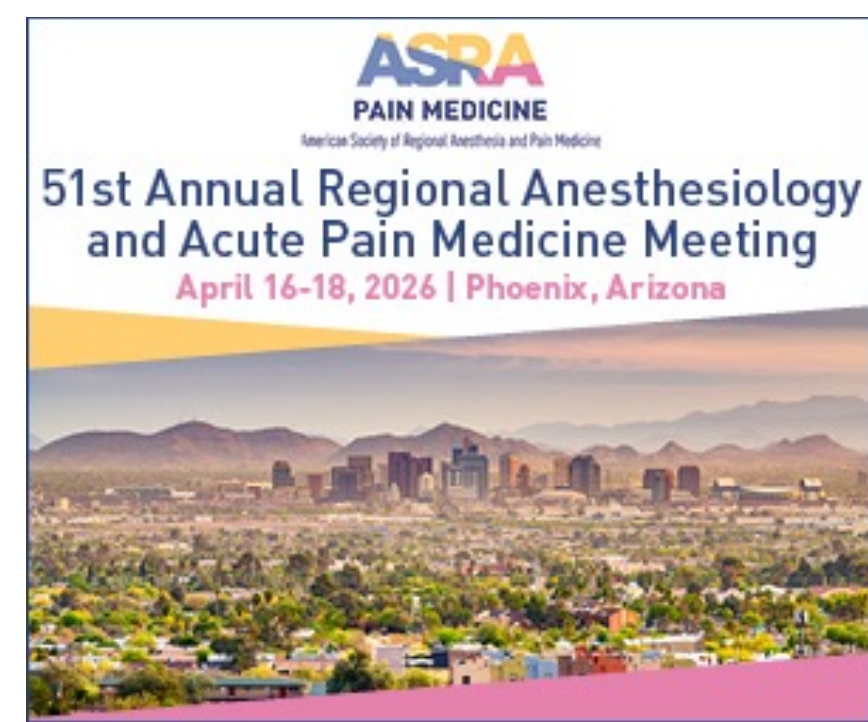




Use of a Metal-Styleted Tuohy Needle Facilitates Tunneling of Infraclavicular Catheters away from the Arm for Surgery: A Case Report

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Background

- **Benefit:** Infraclavicular catheters provide effective, continuous analgesia while reducing opioid consumption [1]
- **Problem:** Accidental dislodgement of infraclavicular catheters often occurs during surgical drape removal
- **Solution:** Subcutaneous tunneling of perineural catheters prevents accidental dislodgement and may reduce infection risk [2,3]

Methods

- **Patient:** 49-year-old female with humeral shaft fracture from a ground level fall who underwent intramedullary nail fixation
- **Technique:**
 - First, an infraclavicular catheter was tunneled using a metal styleted Tuohy needle approximately **8 cm** from its original insertion site
 - **The metal stylet was then:**
 1. Inserted through the same skin puncture utilized for catheter insertion (Figure 1, first panel)
 2. Tunneled underneath previously anesthetized skin
 3. Used as a guide to re-insert the Tuohy needle as a conduit for the catheter (Figure 1, second panel)

Figure

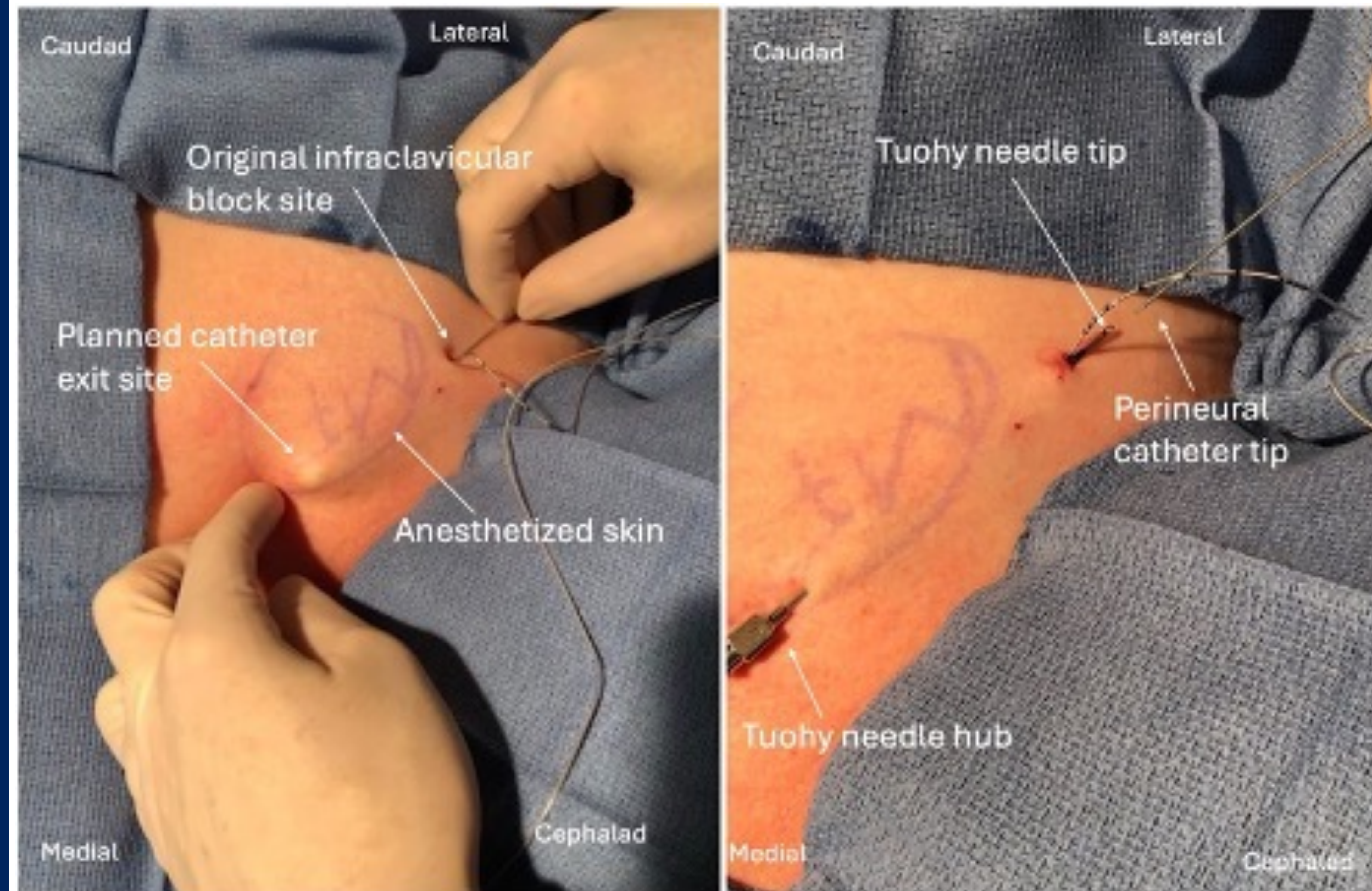


Figure 1. (Left) The metal stylet is inserted under the skin through the original block site and tunneled through previously anesthetized subcutaneous tissue. **(Right)** A Tuohy needle is then inserted over the metal stylet to act as a conduit to bring the catheter through the new planned catheter exit site.

Results

- **Analgesia:** Patient reported excellent pain control (POD 0–2) with a multimodal regimen and continuous nerve block
- **Dislodgement:** Unintentional dislodgement did not occur
- **Removal:** Catheter removed on POD 2 at patient request due to bothersome arm numbness
- **Catheter Damage:** Relocation of the perineural catheter exit site far from the operative field avoided damage to the catheter by attempting to reinsert a needle that blindly exited through the insertion site as previously described [2,3]

Discussion

- **Recommendation:** Subcutaneous tunneling may be an effective technique to secure infraclavicular catheters following humerus surgery
- **Primary Advantage:** Potentially prevents accidental dislodgement and relocates the exit site outside of the surgical field

References

1. Mariano ER, Sandhu NS, Loland VJ, Bishop ML, Madison SJ, Abrams RA, Meunier MJ, Ferguson EJ, Ilfeld BM. A randomized comparison of infraclavicular and supraclavicular continuous peripheral nerve blocks for postoperative analgesia. *Reg Anesth Pain Med.* 2011; 36 (1): 26-31.
2. Boezaart AP. Perineural infusion of local anesthetics. *Anesthesiology.* 2006 Apr;104(4):872-80.
3. Compère V, Legrand JF, Guitard PG, Azougagh K, Baert O, Ouennich A, Fourdrinier V, Frebourg N, Dureuil B. Bacterial colonization after tunneling in 402 perineural catheters: a prospective study. *Anesth Analg.* 2009 Apr;108(4):1326-30.