

Case Report Timeline

Postoperative Day (POD) 0

- 67-year-old man underwent a right total shoulder arthroplasty under general anesthesia
- A right interscalene catheter was placed preoperatively under ultrasound guidance and tunneled posteriorly

POD 1

- The patient was discharged home with an ambulatory pump infusing ropivacaine 0.2% at 6 ml per hour

POD 4

- The catheter broke when the patient attempted to pull out the interscalene catheter at home
- Attempts at bedside removal were made in the emergency room, but the broken catheter remained coiled in his neck (Figure 1)

POD 6

- The patient underwent surgical removal of the retained catheter under monitored anesthesia care (Figure 2)

POD 14

- At his postoperative follow-up visits, his incisions were healing normally and he was neurovascularly intact with 0/10 pain

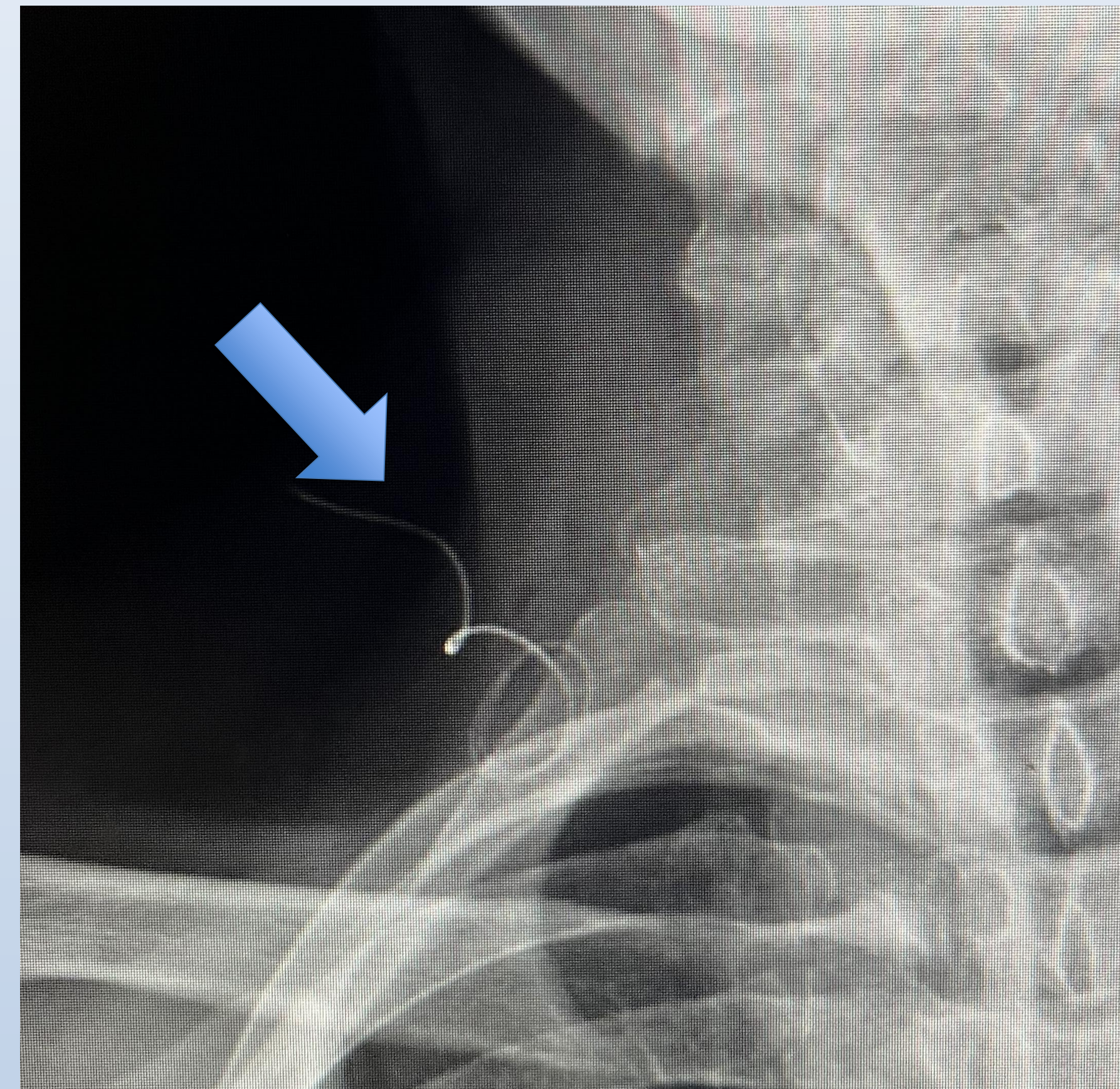


Figure 1: X-ray showing retained catheter

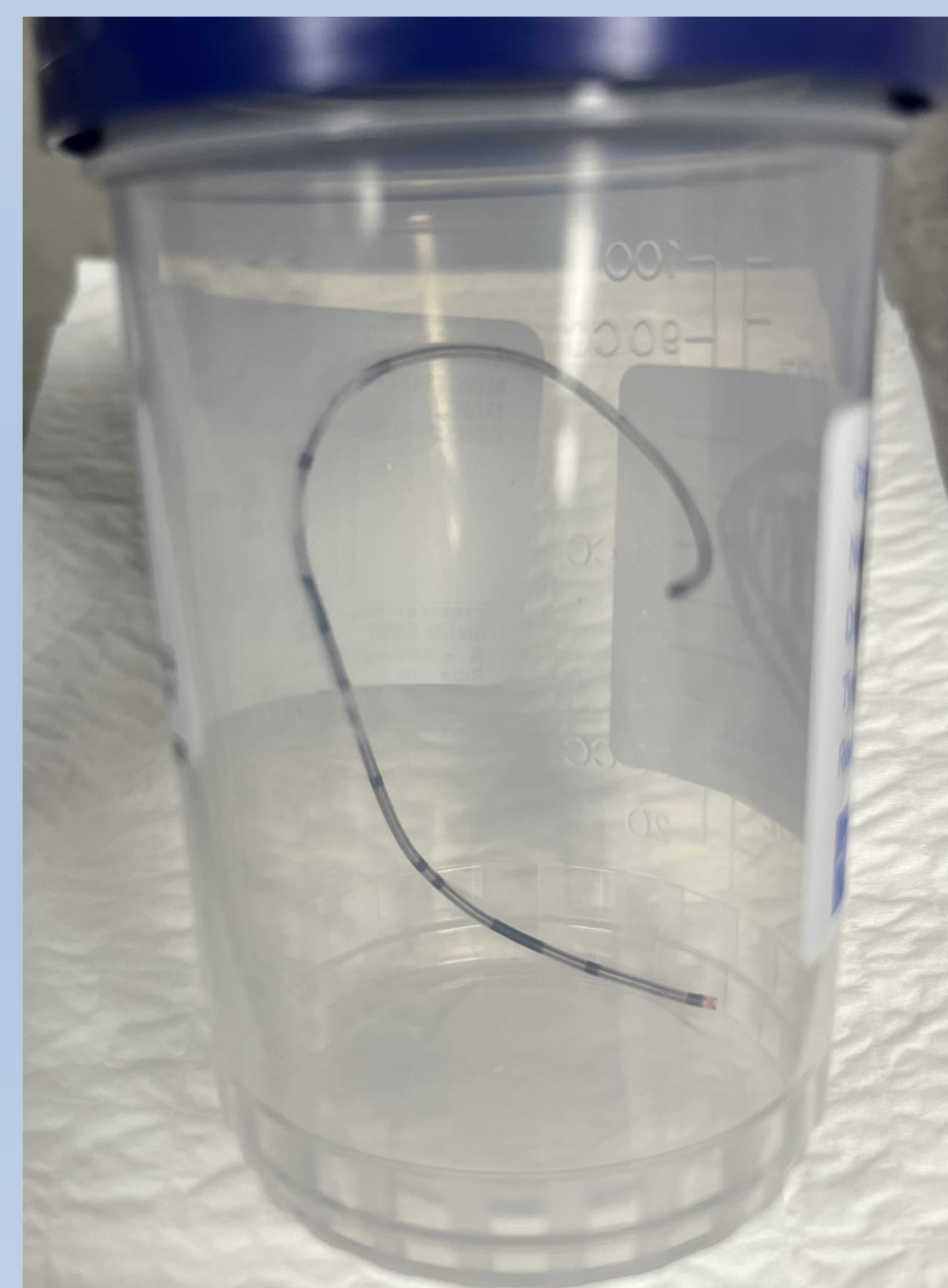


Figure 2: Catheter fragment after removal

Discussion

- **Benefits** of subcutaneous tunneling of a peripheral nerve catheter:
 - Lower rates of bacterial colonization
 - Decreased risk of dislodgment
 - Ensuring the catheter is away from the surgical field
- **Risks** of subcutaneous tunneling:
 - Shearing of the catheter at the time of placement
 - Significantly increasing the force required to remove the catheter
- Strategies that can assist with difficult catheter removal are position changes, holding traction, saline boluses, and inserting a stylet
- Ultimately if these methods are not able to successfully remove the retained catheter, the patient may need to undergo an interventional or surgical procedure for removal