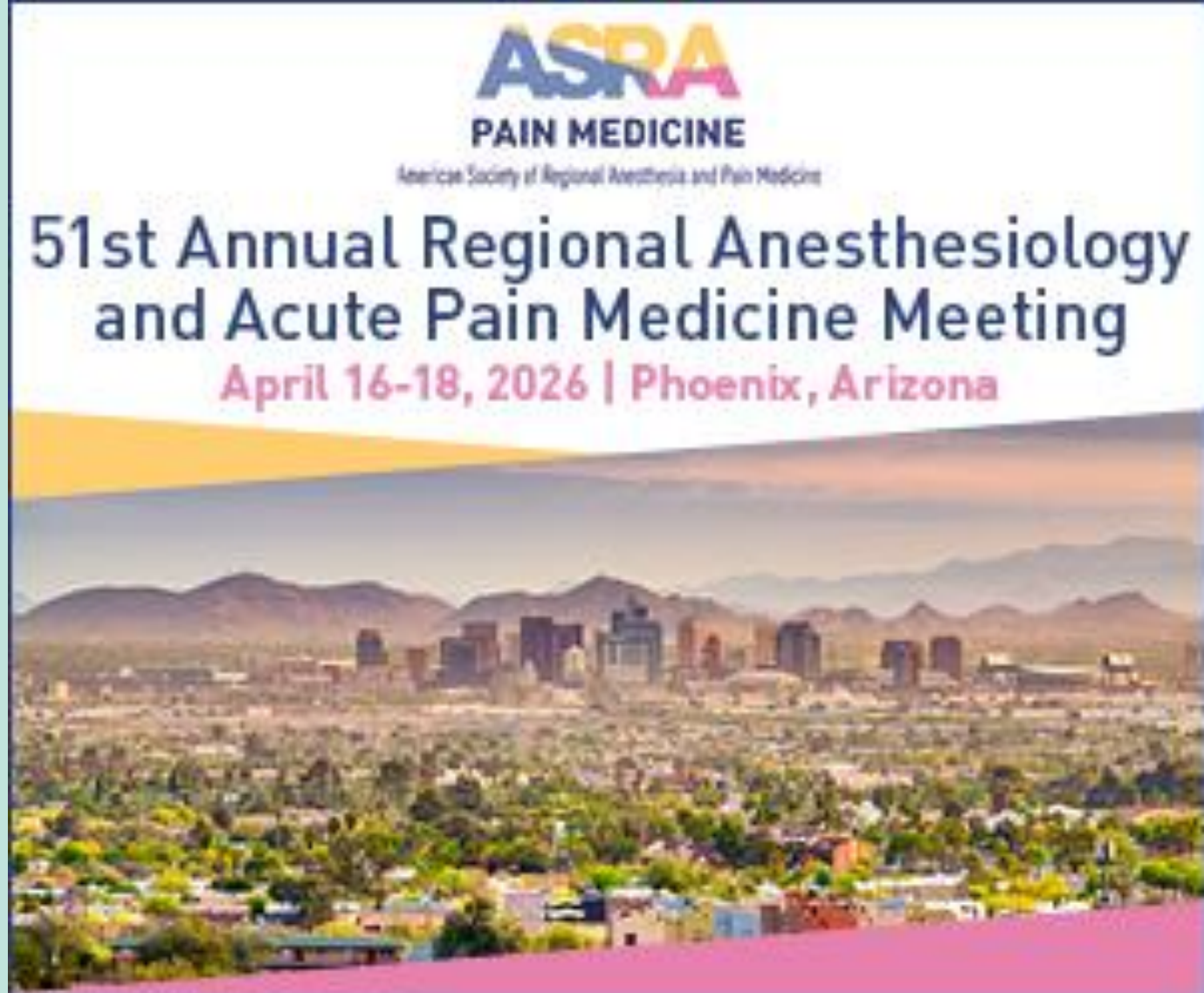


Continuous Erector Spinae Plane Block with a Multiport Catheter for Post-CABG Chest Tube Pain

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Introduction

Multiport nerve block catheters are specialized perineural catheters designed with multiple orifices along the catheter tip to improve local anesthetic distribution compared with traditional end-hole catheters. Current literature rarely specifies catheter orifice configuration outside the interscalene region (1). We report the use of a multiport catheter for an erector spinae plane block (ESP) as part of a multimodal analgesic approach for refractory chest-tube related pain following coronary artery bypass grafting (CABG) in a patient with chronic pain history.

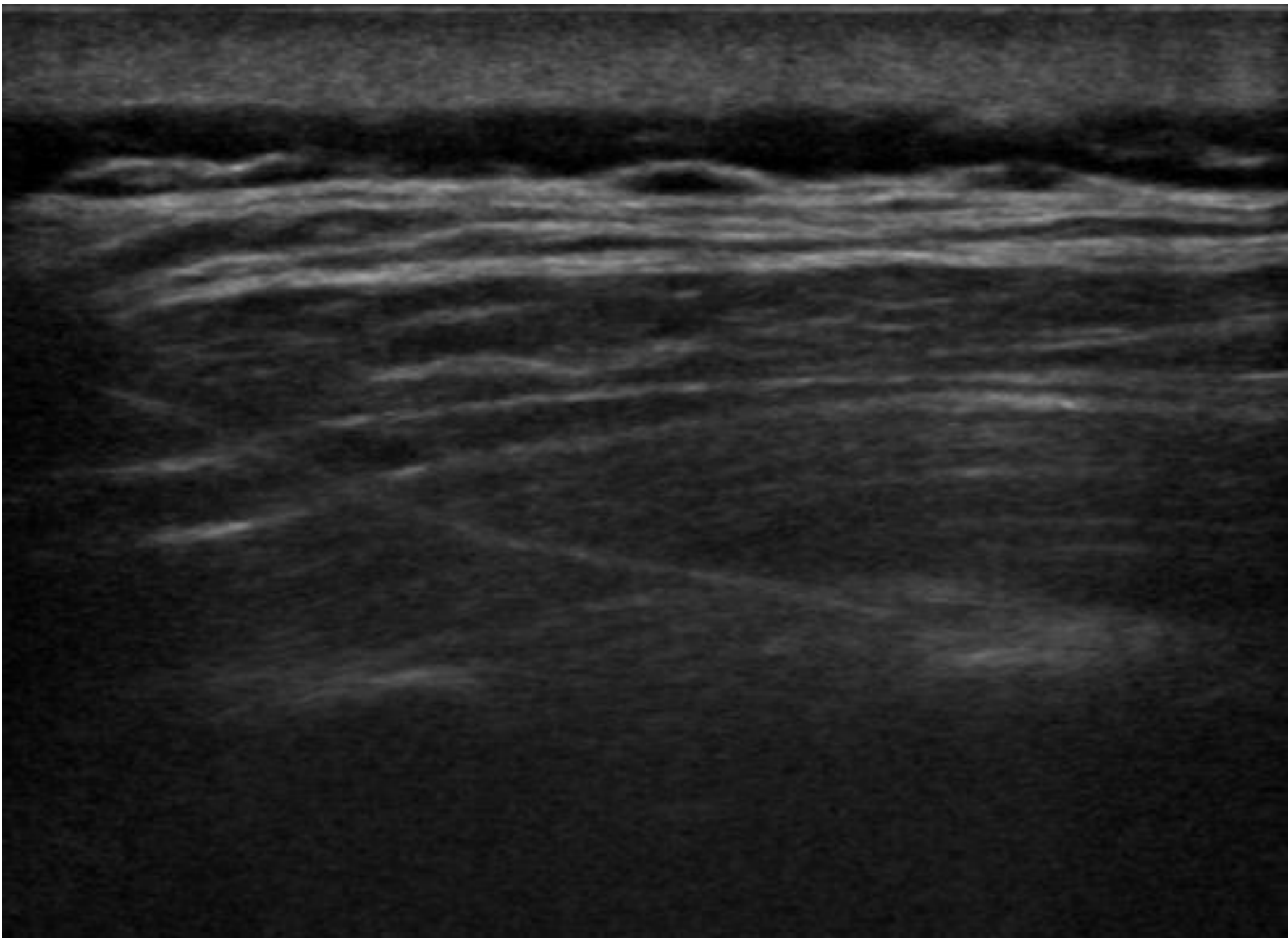
Case Report

A 59-year-old female with coronary artery disease and chronic hip and back pain presented for CABG procedure with placement of multiple chest tubes. Her chronic pain regimen included methadone 70 mg three times daily. Following extubation in the ICU, she developed severe, constant left-sided chest tube-related pain rated 9 to 10 out of 10, requiring escalating opioid doses. Given her chronic pain history, a multimodal analgesic approach was pursued:

- Ketamine infusion started at 3 mcg/kg/min and weaned within two days
- Left sided ESP block performed with continuous catheter from T4-T8 using a 5-inch Avanos ON-Q Silver Soaker multiport catheter (2)
- Other multimodal agents: scheduled acetaminophen, ketorolac, pregabalin, diazepam, and oral oxycodone and IV hydromorphone for rescue.

The patient's pain significantly reduced within one day. Once the chest tubes were taken out on post-op day 2, the ESP catheter was also removed. The patient returned home with her baseline pain medications.

ESP Block Anatomy; Multiport Catheter Design



Ultrasound image demonstrating in-plane needle placement into the fascial plane between the erector spinae muscle and transverse processes.

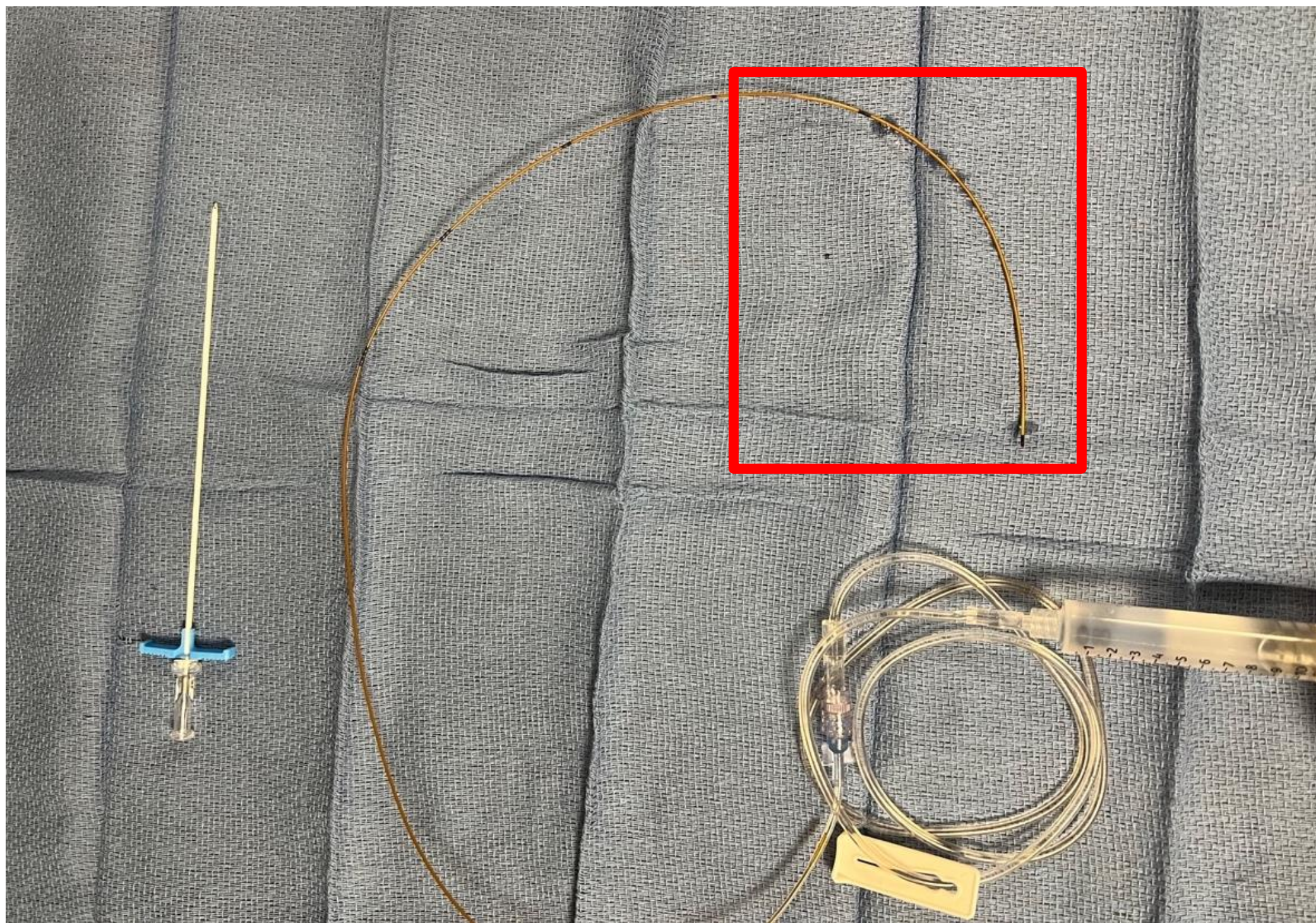


Image depicting the Avanos needle and ON-Q Silver Soaker multiport catheter used for continuous ESP blockade, with distal ports highlighted in the red box.

Discussion

This case report highlights the potential benefits of multiport catheters for achieving multilevel thoracic analgesia in ESP blocks after cardiothoracic surgery. Prior randomized data demonstrate superior performance of multiport compared with end-hole catheters in interscalene blocks (1). Continuous ESP blocks have been described for multiple indications (3,4), however comparative studies on catheter design are lacking. The effective analgesia observed in this case highlights the clinical utility of multiport ESP catheters and warrants further clinical investigation.

Conclusion

Continuous ESP blockade using a multiport catheter can provide effective analgesia for chest tube pain after CABG. Multiport catheter design may allow broader, more consistent anesthetic distribution across thoracic dermatomes. In this case report, a multimodal pain regimen including novel use of a multiport nerve block catheter for an ESP block was effective in reducing the patient's pain significantly.

References

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