

ULTRASOUND GUIDED SERRATUS ANTERIOR PLANE BLOCKS: A CASE SERIES IN POST-MASTECTOMY PAIN SYNDROME MANAGEMENT

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INTRODUCTION

Post-mastectomy pain syndrome (PMPS) is a prevalent and persistent pain condition affecting 36–68% of breast cancer survivors following breast surgery. Characterized by persistent pain in the anterior chest, axilla, and shoulder. Ultrasound-guided serratus anterior plane (SAP) block has emerged as a promising non-surgical interventional technique for mitigating PMPS, offering effective pain relief. This case series evaluates the utility of SAP blocks in six patients with PMPS.

METHODS

Ultrasound-guided SAP block was performed using sterile techniques. The serratus plane was visualized via ultrasound, and a 25-gauge, 1.5-inch needle was employed to inject 1 cc of 40 mg/mL triamcinolone acetonide, 4 cc of 0.25% bupivacaine, and 5 cc of 1% lidocaine. Pain relief and functional improvement were assessed during follow-up visits.

DISCUSSION

PMPS is a diagnosis that encompasses multiple pain etiologies. Some patients may experience diffuse chest wall pain from a neuropathic pain generator and/or late effects from radiation fibrosis syndrome. Peripheral sensitization from nerve compression or injury leads to heightened nociceptive input, hyperalgesia, and central sensitization. SAP blocks disrupt hyperactive sensory nerve signaling, providing effective pain relief while potentially mitigating central sensitization. All six patients with PMPS demonstrated improved pain and function, highlighting SAP blocks' clinical utility.

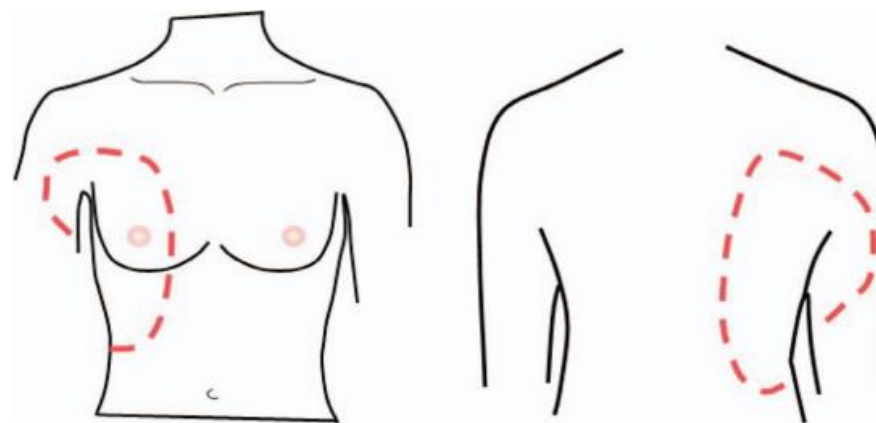
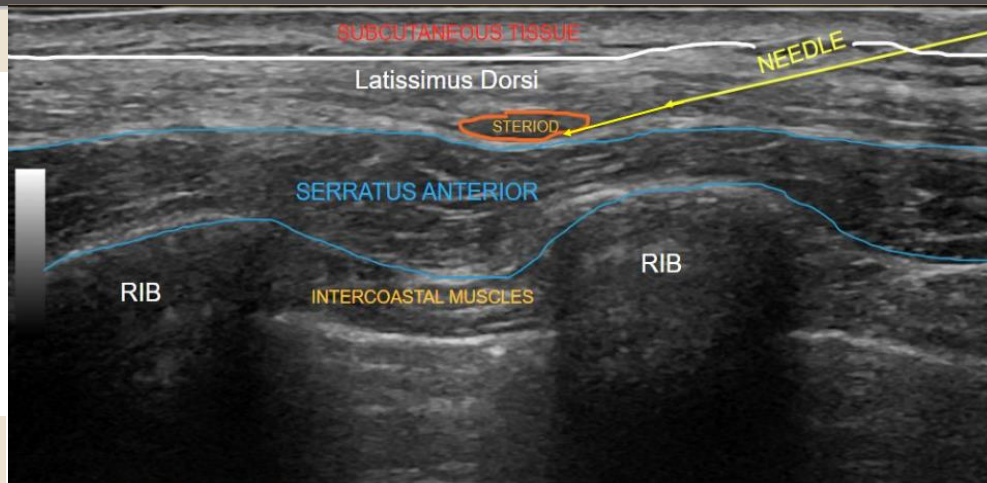


Figure 2. Illustration of the expected area of sensory loss following serratus plane block.

CASE SERIES

Case 1: 52-year-old female post-bilateral mastectomies and DIEP flap reconstruction experienced bilateral chest wall hyperalgesia and failed conservative therapies. Bilateral SAP blocks provided significant pain relief lasting 7–8 months.

Case 2: 63-year-old female post-bilateral mastectomies with chronic chest wall pain unresponsive to conservatives' therapies noted marked pain reduction after left SAP block, with plans for right SAP block.

Case 3: 55-year-old female post-bilateral mastectomies with implant-based reconstruction reported chronic pain affecting sleep and daily activities. Bilateral SAP blocks provided immediate relief, enabling the patient to tolerate wearing a bra and laying on her side.

Case 4: 50-year-old female with post-bilateral mastectomies reported bilateral chest wall pain, reduced range of motion (ROM). A single SAP block led to significant pain reduction and functional improvement.

Case 5: 59-year-old female post-bilateral implant removal and capsule resection presented with persistent right chest wall and trapezius pain, limiting her ability to work. Multiple SAP blocks over 3–4 months resulted in significant pain reduction and improved function.

Case 6: 52-year-old female post-unilateral lumpectomy and oncoplastic reconstruction presented with persistent left chest wall pain and restricted shoulder ROM. A left SAP block improved mobility and pain. Subsequent pectoral injections with botox were less effective.