



Erector Spinae Block to Manage Chronic Chest Wall Pain Emphasizing the Potential for Regional Anesthesia in Managing Chronic Pain.

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Introduction

Regional anesthesia is often part of a multimodal regimen to address acute pain typically in the perioperative setting. However, the role of regional anesthesia in managing chronic pain is not as well established. Recent publications have shown the increasing use of regional anesthesia in the management of chronic pain and its potential to provide effective, long-lasting pain relief, well beyond the expected duration of the local anesthetics used ^{1,2}. This ability to provide targeted pain relief has been used to treat a variety of painful conditions including Complex Regional Pain Syndromes (CRPS), neuropathic and cancer related pain ³. Effective pain management can lead to improved physical functioning, mental health and quality of life in patients with chronic pain. This case report highlights a case encountered in our Chronic Pain clinic where a patient had several months of effective pain relief after a regional anesthetic technique targeting the nerves supplying the painful area.

Materials and Methods

- As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per UMMC policy.
- An informed consent was obtained from the patient for this presentation.

Case Report

A 50-year-old male presented with chronic chest wall pain following an MVC in which he sustained multiple rib and spinous process fractures. He complained of sharp stabbing pains in the right T6-9 dermatomes. He was managed conservatively by orthopedic surgery with short course of opioids, NSAIDs and Physical therapy with temporary improvement. However, he continued to have significant chronic pain that persisted beyond 6 months. A thoracic epidural steroid injection gave him temporary pain relief from his radicular chest pain symptoms. He was subsequently scheduled for a right erector spinae block following which he reported almost complete pain relief soon after the block which was sustained over the next 4 months. A repeat block was performed 4.5 months later when pain gradually returned in the same location and he is now 3 months post with greater than 90% pain relief allowing him to go about his ADLs with minimal interference.

Erector Spinae Block

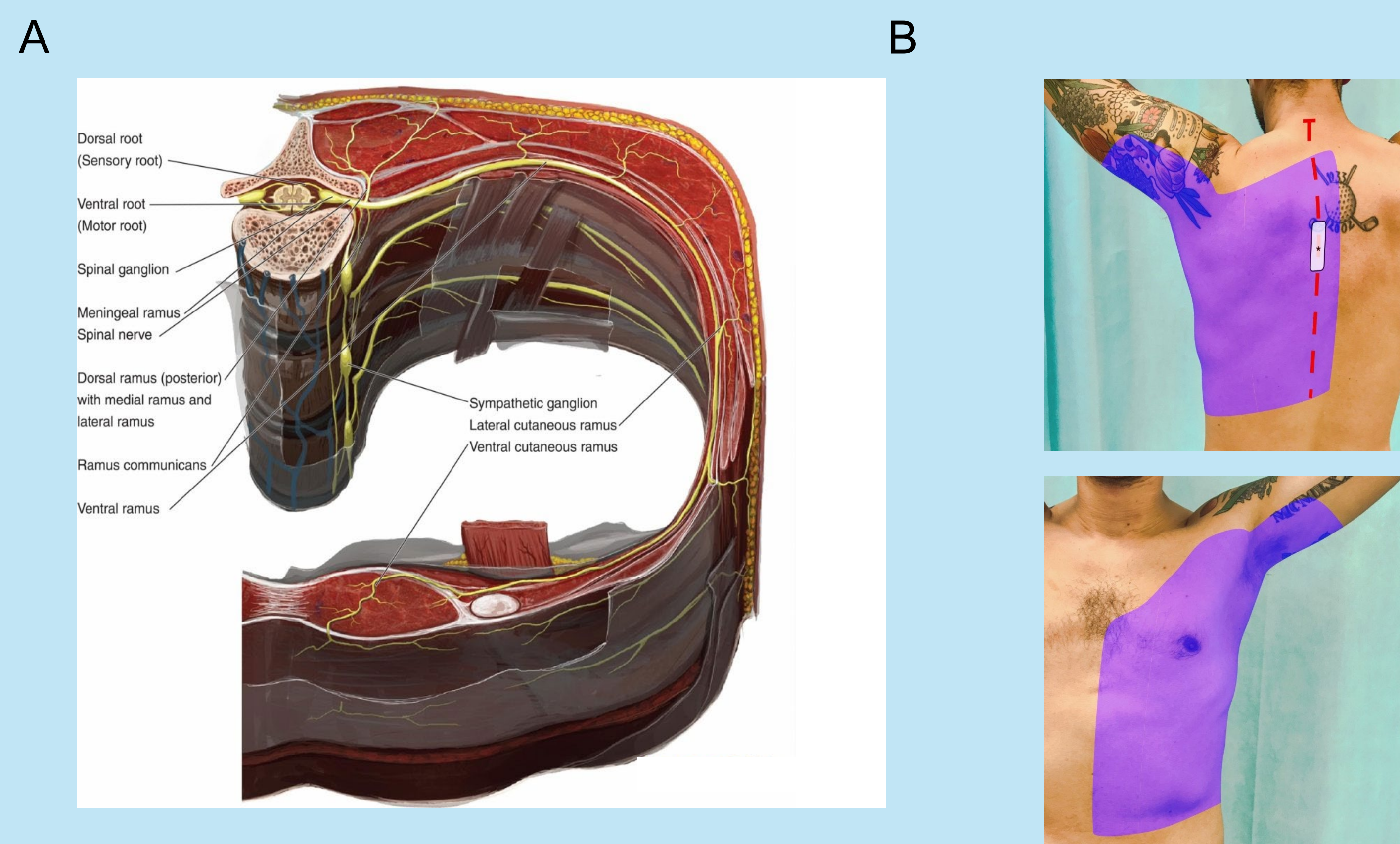


Figure 1 A) Anatomy of spinal nerves supplying the thorax ⁷. B) Distribution of anesthesia provided by an erector spinae nerve block ⁶.

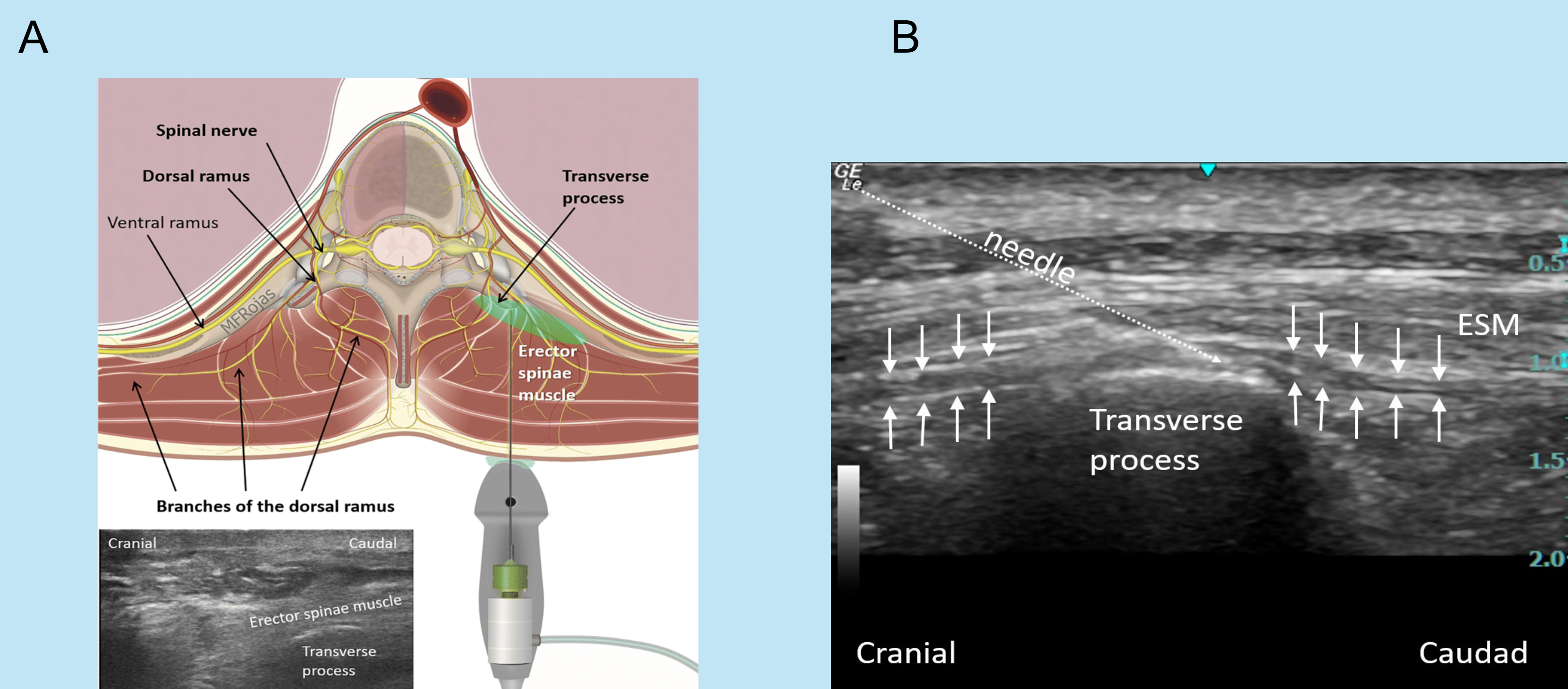


Figure 2 A) Location of local anesthetic deposition in an erector spinae nerve block with inset of ultrasonographic anatomy ⁸. B) Demonstration of ultrasound-guided deposition of local anesthetic between the transverse process and erector spinae muscle ⁹.

Discussion

While the mechanism by which these regional techniques reduce chronic pain is largely unknown, several postulated mechanisms include their role in reducing central sensitization, anti-inflammatory effects of local anesthetics, suppression of the adrenergic response, and altering neuroplasticity. Lack of standardization in dose, agents, and techniques when used in the chronic pain arena is a limiting factor besides the skills required to perform these techniques. The need for a longer post-procedure observation time before discharge may necessitate a change in clinic throughput as chronic pain clinics typically have space and personnel limitations. As interventional pain physicians become increasingly facile with these techniques, the adoption of regional anesthesia in the management of chronic pain will become more widespread. Further studies are required to elucidate the mechanisms of action in chronic pain as well as the best options of local anesthetics and adjuvants used, dosing, frequency of blocks, optimal indications, and techniques in the management of various chronic pain conditions. There is no doubt that regional anesthetic techniques can be an effective component of a multimodal regimen in the management of Chronic pain besides their more recognized role in perioperative pain management.

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