

*Regional Anesthetic Management
of Clavicular and Rib Fractures in
an Elderly Patient with Continuous
Erector Spinae Plane Block*



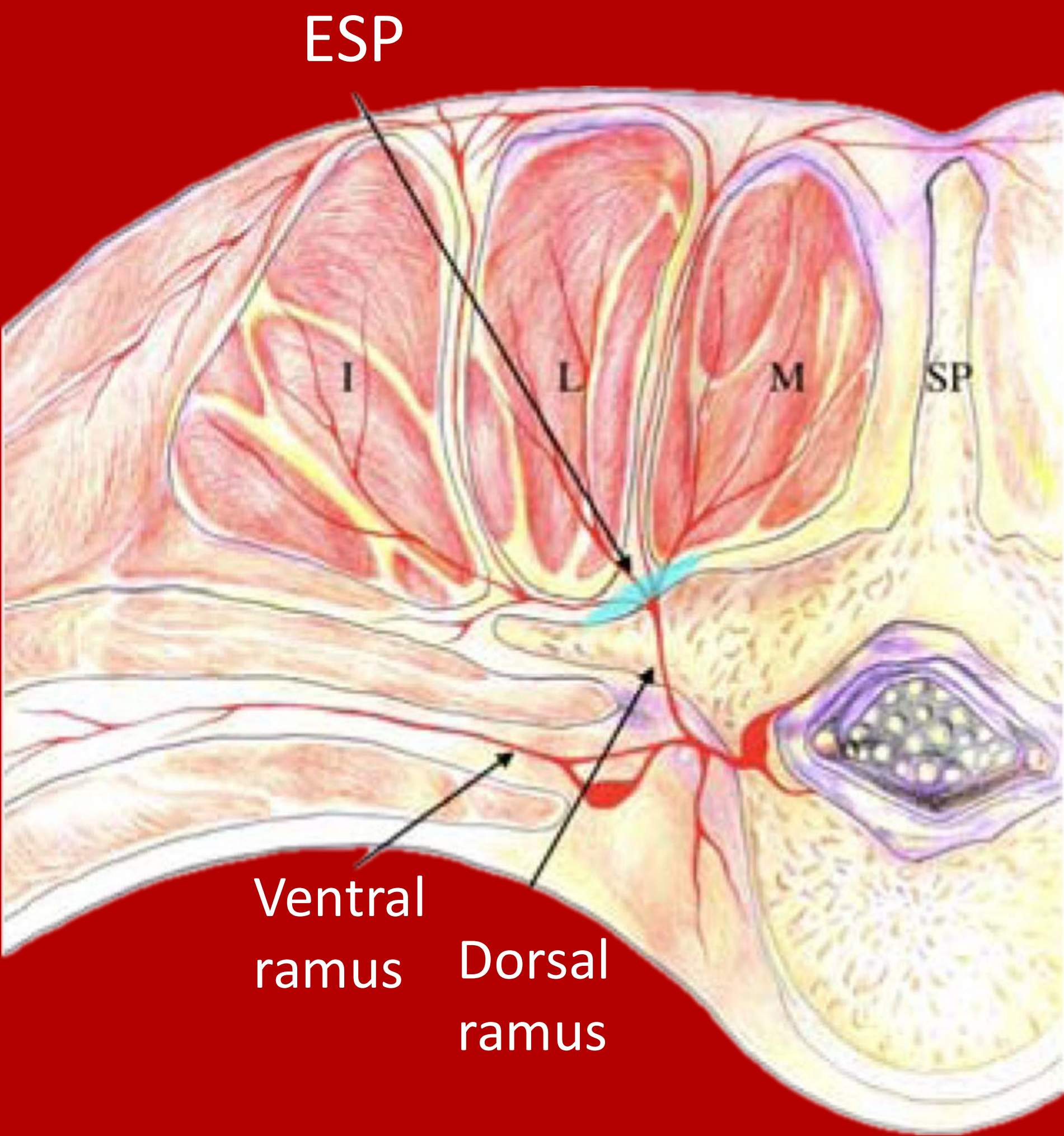
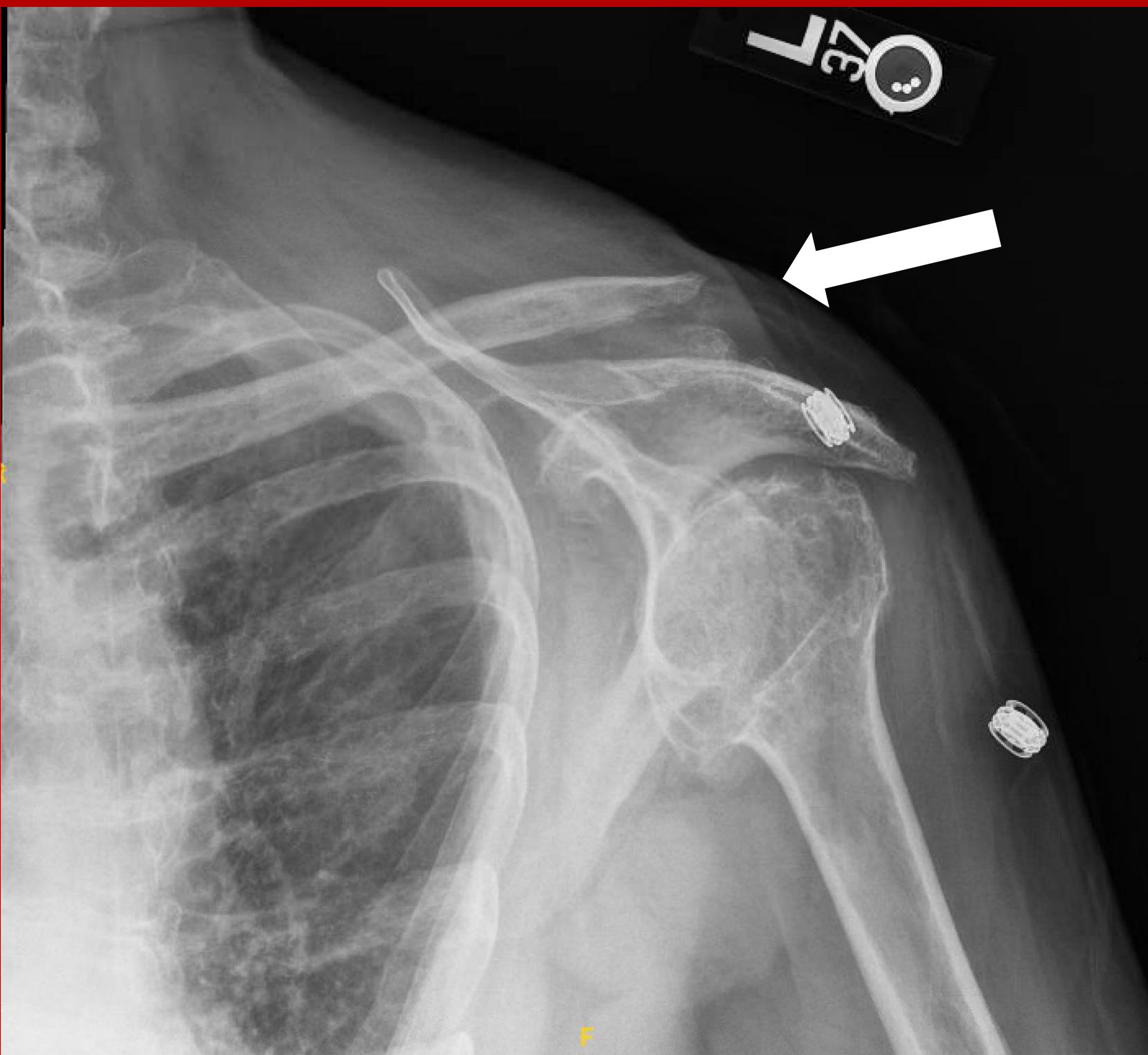
PRESENTER:
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BACKGROUND: Rib fractures, often accompanied by pleuritic pain, can reduce a patient's inspiratory effort, leading to atelectasis and an increased risk of pneumonia, especially in elderly and immobile populations.

CASE

- **Patient:** An 80-year-old woman with multiple sclerosis and multiple falls, presenting with left clavicle fracture and left 2nd, 3rd, and 4th rib fractures.
- **Admission:** The patient was deemed not to require inpatient surgical repair and was admitted to the surgical ICU due to concern for developing respiratory compromise.
- **Treatment:** Left erector spinae plane (ESP) block at the level of T3 with 20mL of 0.25% ropivacaine for pain relief, followed by a perineural catheter that infused 0.2% ropivacaine at 7mL/hr.
- **Outcome:** Patient had immediate and near complete pain relief, allowing adequate respiratory function.
- **Discharge:** Patient discharged to rehabilitation facility two days after the block placement.

The ESP block shows
promise for treating
clavicle fracture pain,
minimizing risks of
decreased respiratory
effort while accelerating
recovery.



- Discussion**
- **ESP Block:** Injection of local anesthetic in the fascial plane between the erector spinae and paravertebral space to inhibit nociceptive neurotransmission from the dorsal and ventral rami of local spinal nerves.
 - **ESP Block Applications:** Used for pain relief in various procedures, including rib fractures, thoracotomies, percutaneous nephrolithotomies, ventral hernia repairs, and lumbar fusions.
 - **ESP Block for Clavicle Fracture:** The spread of the anesthetic across 3-4 levels cranially (and caudally) during both initial injection and continuous delivery is hypothesized to enable blockade of the high thoracic and cervical spinal nerves that supply the clavicle and neighboring tissue.
 - In this case, injection at T3 immediately relieved the patient’s pain at the ribs and the clavicle, enabling expedient discharge from the hospital without the development of respiratory compromise.

References

- References available on request, correspondence to Nicholas.Mangano@stonybrook.edu

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