

Shoulder Shot, Pain Stop: Durable Upper-Extremity Pain Relief from a Suprascapular Block in CRPS

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UCONN HEALTH

Background

- Complex regional pain syndrome is a chronic pain disorder characterized by disproportionate pain and sensory, vasomotor, sudomotor, and motor abnormalities.
- Sympathetic blocks are commonly used in upper-extremity CRPS, but pain may involve multiple peripheral and central mechanisms.
- Can targeting somatic shoulder afferents provide durable benefit for neuropathic upper extremity pain when sympathetic blocks provide only transient relief?

Case Presentation

- A 32-year-old man developed immediate left shoulder pain radiating to the fingers after falling onto his left shoulder and elbow. He developed persistent tightness, cramping, burning pain, paresthesias, allodynia, intermittent swelling, warmth, mottling, and reduced left shoulder range of motion.
- Pain was aggravated by movement, lifting, reaching, and maintaining the arm in a dependent position. Before the index intervention, pain was reported as 7–10/10 and significantly impaired sleep, function, and quality of life.

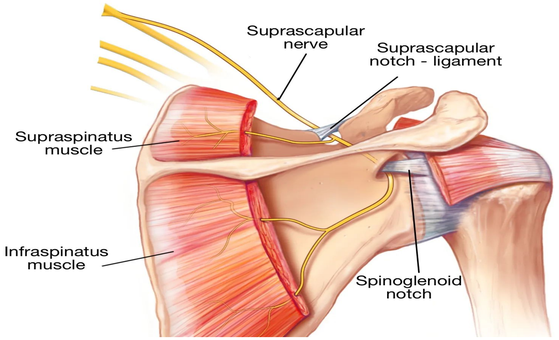


Figure 1: Anatomical relationships of the suprascapular nerve.

Clinical Timeline

Nov. 2023	Fall onto left shoulder and elbow	Immediate shoulder-to-hand pain, burning, paresthesias, swelling, cramping, molted skin, allodynia
2024–2025	PT, OT, TENS, shoulder injection	Minimal or short-term improvement
Dec. 2025	Left stellate ganglion block	Limited benefit; subsequent neck/chest redness and swelling were reported
March 2026	Repeat left stellate ganglion block	Approximately 50% relief for only 2–3 days
May 2026	Persistent severe pain; treatment reassessment	Suprascapular block selected; peripheral nerve stimulation discussed but deferred
June 2026	Ultrasound-guided left suprascapular nerve block	50–70% ongoing improvement
June 2026	Follow-up	Pain improved to 2–4/10; improved mobility and fewer flares



Figure 2: Representative comparison of the affected and unaffected hands showing unilateral edema and skin pallor. Not the actual patient.

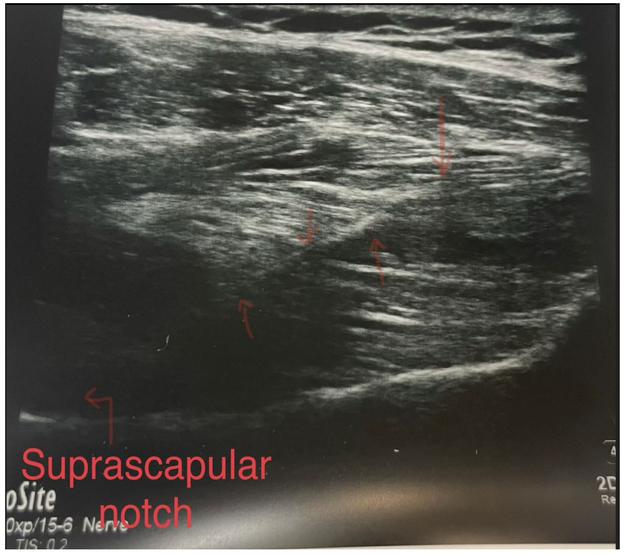


Figure 3: Ultrasound-guided suprascapular nerve block at the suprascapular notch.

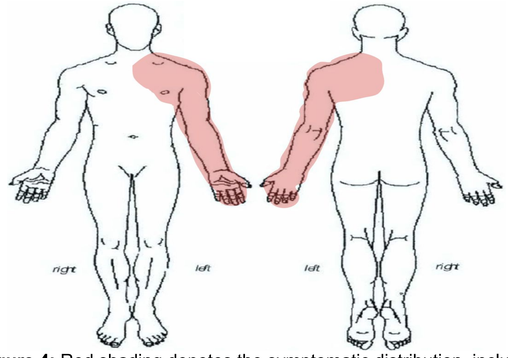


Figure 4: Red shading denotes the symptomatic distribution, including pain, allodynia, paresthesia, swelling, and mottling.

Discussion

- This case highlights the multifactorial nature of CRPS.
- Although sympathetic blocks are commonly used for upper extremity CRPS, this patient experienced only short-lived benefit from two prior stellate ganglion blocks.
- A suprascapular nerve block targeting somatic shoulder afferents produced more durable analgesia and functional improvement.
- The mechanism of the widespread response in this patient remains uncertain.
- Possible mechanisms include spread to adjacent fascial planes, modulation of convergent nociceptive input, interaction between somatic and sympathetic pain pathways.

Conclusion

- While treatment to the clinically dominant pathway should be considered as a first line option, when failed, consider other secondary pathways that may maximize functional improvement even if it does not align precisely with the physiology of CRPS.
- Ultrasound-guided suprascapular nerve block provided meaningful long-term pain relief and improved shoulder mobility, supporting its role as a potential adjunctive treatment for upper-extremity CRPS.

References

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