

Successful Ultrasound-Guided Stellate Ganglion Block for Long COVID Related Neuropathic Pain: A Case Report

Rubela Ray, MD; Kristina Patel, MD

Introduction

Long COVID has been associated with persistent neuropathic pain and dysautonomia, significantly impairing patients' quality of life. These symptoms are often resistant to standard pharmacologic and physical therapy interventions. Stellate ganglion block (SGB), targeting the sympathetic chain, has been proposed as a therapeutic option; however, evidence supporting its efficacy remains limited. This report describes a case of successful pain management using ultrasound-guided SGB in a patient with long COVID-related neuropathic pain.

Case Description

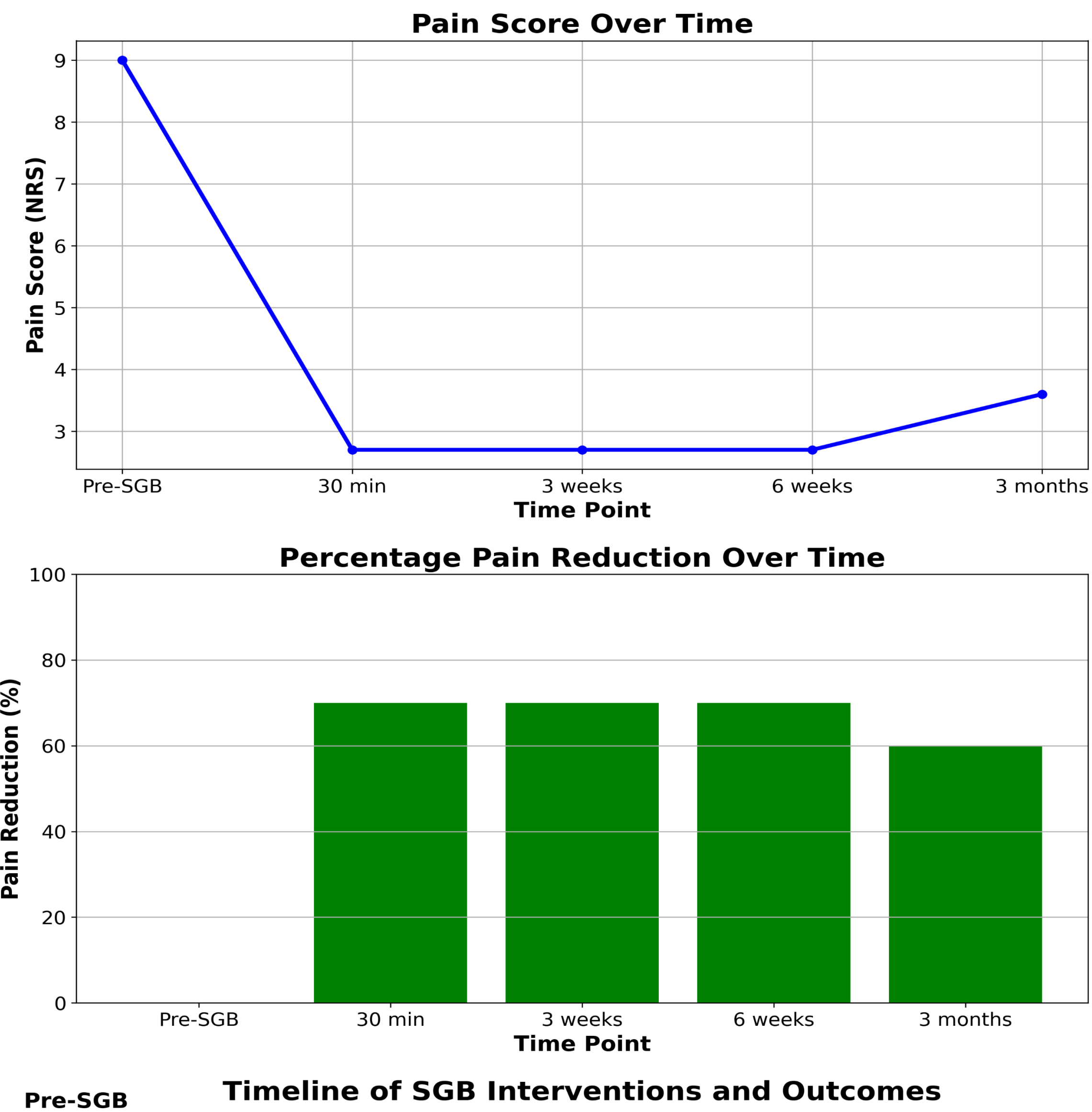
A 48-year-old patient presented with severe burning neuropathic pain involving the right upper extremity and face, persisting 18 months post-COVID-19 infection. Despite treatment with gabapentin, duloxetine, and physical therapy, pain intensity remained 9/10. Physical examination demonstrated hyperalgesia and autonomic changes (skin temperature asymmetry). The patient underwent ultrasound-guided stellate ganglion block at the C6 level using a 22-gauge needle and 6 mL of 0.25% bupivacaine. The procedure was performed under aseptic conditions with continuous hemodynamic monitoring.

Results

- The procedure was well tolerated and produced immediate ipsilateral Horner's syndrome (ptosis, miosis), confirming block success.
- Pain scores decreased by approximately 70% within 30 minutes and remained improved for 3 weeks.
- A repeat SGB further extended relief to 6 weeks.
- At 3-month follow-up, the patient reported sustained 60% pain improvement, better functional status, and return to part-time work without complications.

Discussion

This case demonstrates that ultrasound-guided SGB can provide clinically meaningful and sustained pain relief in patients with long COVID-related neuropathic pain unresponsive to standard care. The sympathetic blockade may modulate autonomic dysfunction and central sensitization underlying chronic pain in this population.



Conclusions

While promising, larger prospective studies are needed to validate safety, efficacy, and long-term outcomes of SGB as part of a multimodal approach to post-COVID neuropathic pain.

Contact

Rubela Ray, MD
Email: ray_rubela@yahoo.com