

Relief of Stapedial Myoclonus and Facial Pain with Stellate Ganglion Block

Block: A Case Report

Michael Liu BS¹; Amy Zhou BS¹; Shyam Desai MD²; Samer Narouze, MD, PhD²

¹Case Western Reserve University School of Medicine, Cleveland, OH, USA

²University Hospitals, Department of Anesthesiology, Pain Management Division, Cleveland, OH, USA



University Hospitals
Cleveland Medical Center

Background

- **Stapedius myoclonus** can cause rhythmic “machine-gun” tinnitus from involuntary stapedius contractions.
- Given **possible sympathetic overactivity**, **stellate ganglion block (SGB)** may offer therapeutic benefit.
- This is **the first reported case of SGB** improving **both stapedial myoclonus and facial pain**.

Case Presentation

- Female in her 70s with >10-year history of **left facial pain and stapedial myoclonus** described as “machine-gun” tinnitus.
- Symptoms triggered by sound, cold, and position; severe impact on daily function and mood.
- Failed extensive pharmacologic and procedural therapies, including **gabapentin, duloxetine, trigeminal and sphenopalatine ganglion blocks**, and ketamine infusions.
- Underwent serial **ultrasound-guided left stellate ganglion blocks (C6–C7)** using **0.5% bupivacaine + 4 mg dexamethasone**.
- Continuous hemodynamic monitoring and ultrasound guidance ensured accurate injectate spread.

Clinical Course and Outcomes

- Serial **ultrasound-guided stellate ganglion blocks** produced **progressive, sustained improvement** in both facial pain and stapedial myoclonus.
- The **first block** achieved ~30% relief lasting four weeks; subsequent injections provided **up to 90% relief** for five weeks with residual 50–60% benefit.
- Each treatment reduced the **frequency and intensity** of her “machine-gun” tinnitus, unlike prior interventions.
- The **duration of benefit increased** with successive procedures, suggesting a **cumulative neuromodulatory effect**.
- **No complications** were observed, and overall quality of life improved substantially.

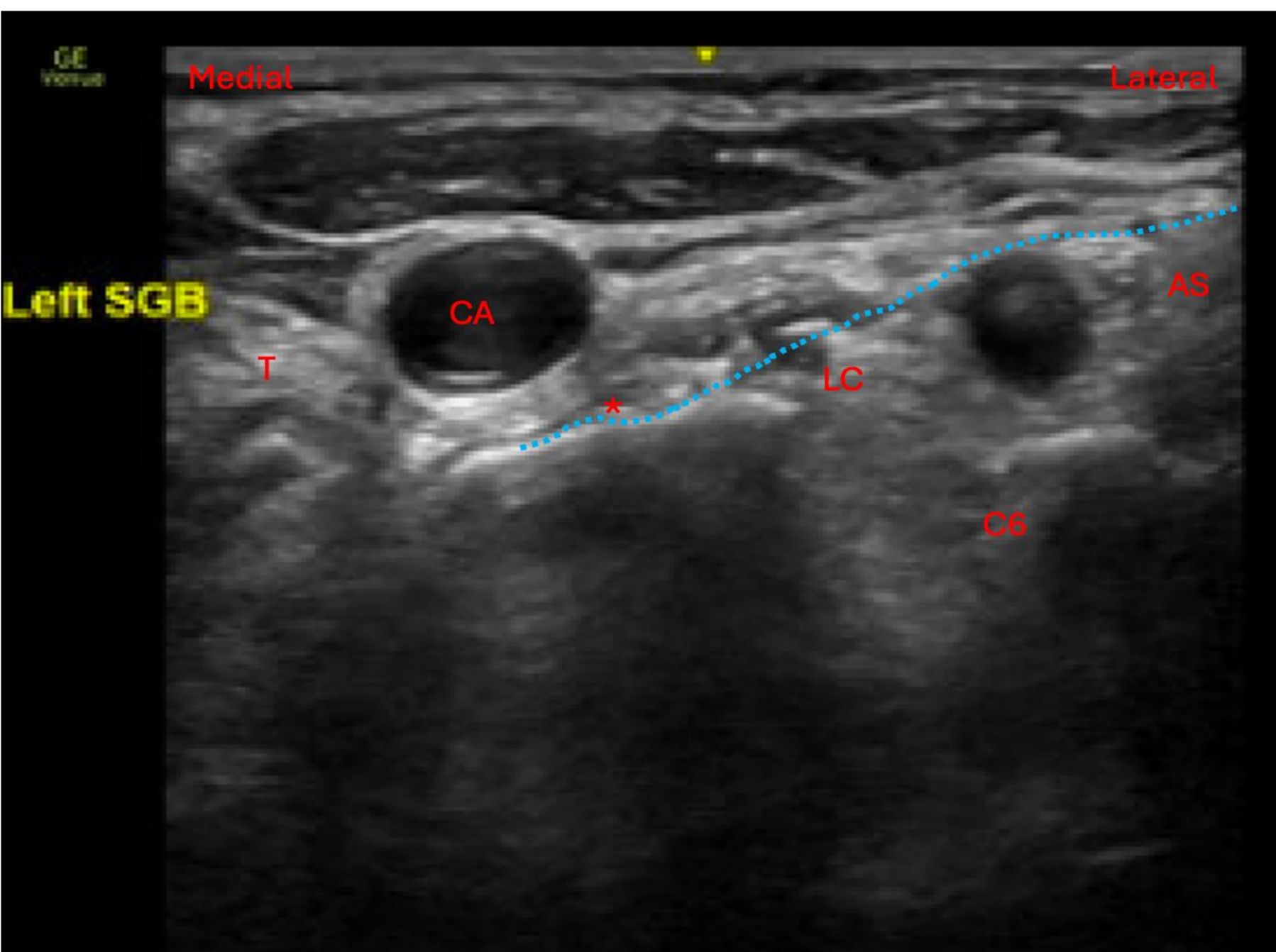


Image 1: Ultrasound image of left stellate ganglion block prior to injection. CA: carotid artery, T: thyroid, LC: longus colli, AS: anterior scalene muscle, *: target location. Dashed line represents the prevertebral fascia.

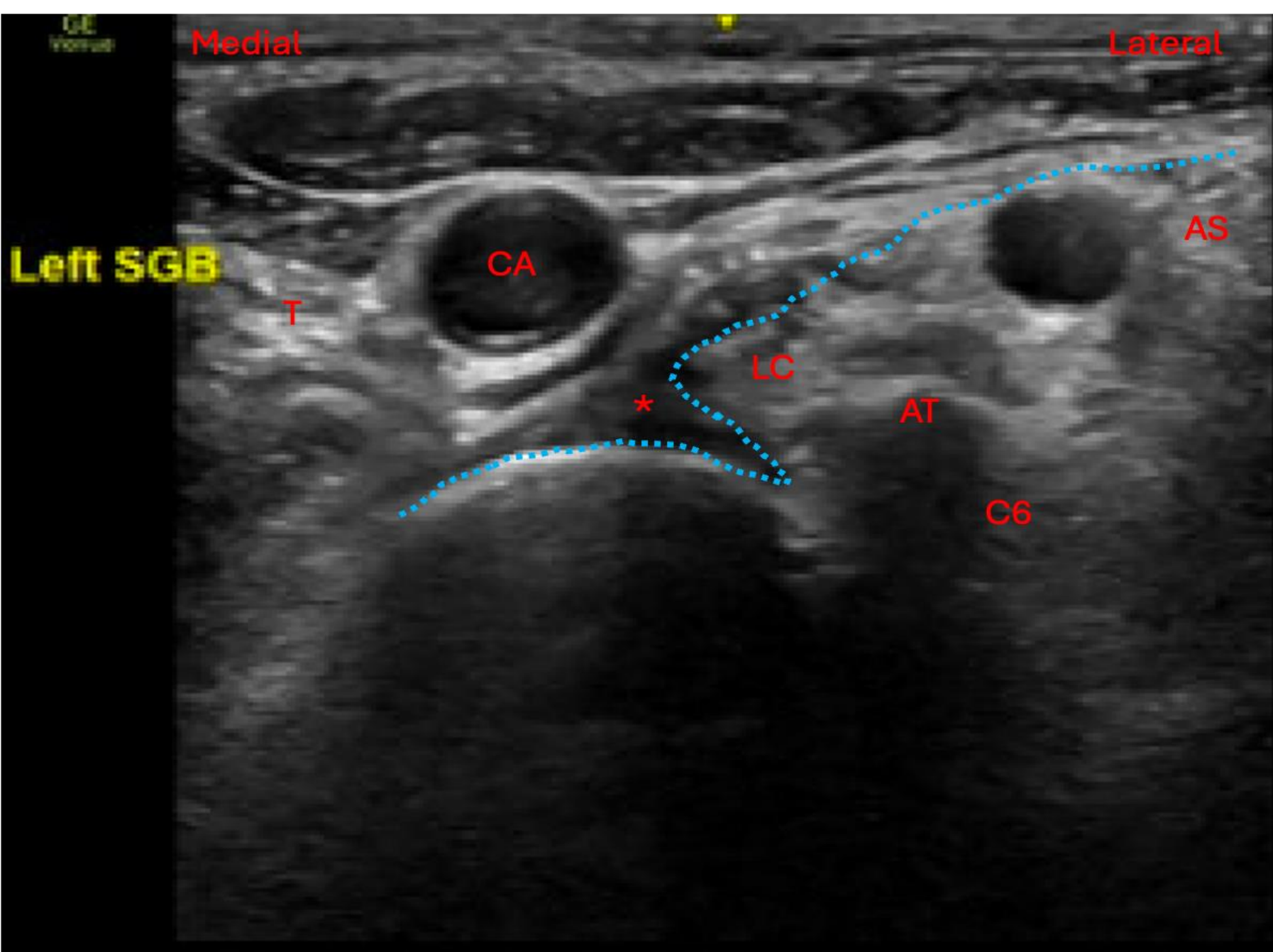


Image 2: Ultrasound image of left stellate ganglion block after injection. CA: carotid artery, T: thyroid, LC: longus colli, AS: anterior scalene muscle, *: target location. Dashed line represents the prevertebral fascia.

Conclusions

- This case demonstrates the **first reported use of stellate ganglion block (SGB)** for concurrent **facial pain and stapedial myoclonus**.
- The patient’s parallel improvement in **pain and myoclonus** suggests a shared mechanism involving **sympathetic dysregulation**.
- SGB likely provided relief through **autonomic modulation** and **reduction of nociceptive sensitization** in the trigeminal distribution.
- The **progressive, longer-lasting benefit** with repeated blocks supports a **neuromodulatory effect** rather than transient anesthesia alone.
- Given its **safety, feasibility, and sustained efficacy**, SGB may represent a **novel therapeutic option** for refractory facial pain syndromes with autonomic features.
- Further study is warranted to clarify mechanisms and define treatment protocols.

References

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