

Cervical Sympathetic Blockade for PTSD: Clinical Outcomes and Randomized Trial Evidence

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Introduction

Stellate ganglion block has emerged as a potential intervention for PTSD based on the hypothesis that modulation of cervical sympathetic outflow reduces autonomic hyperarousal and downstream limbic dysregulation.

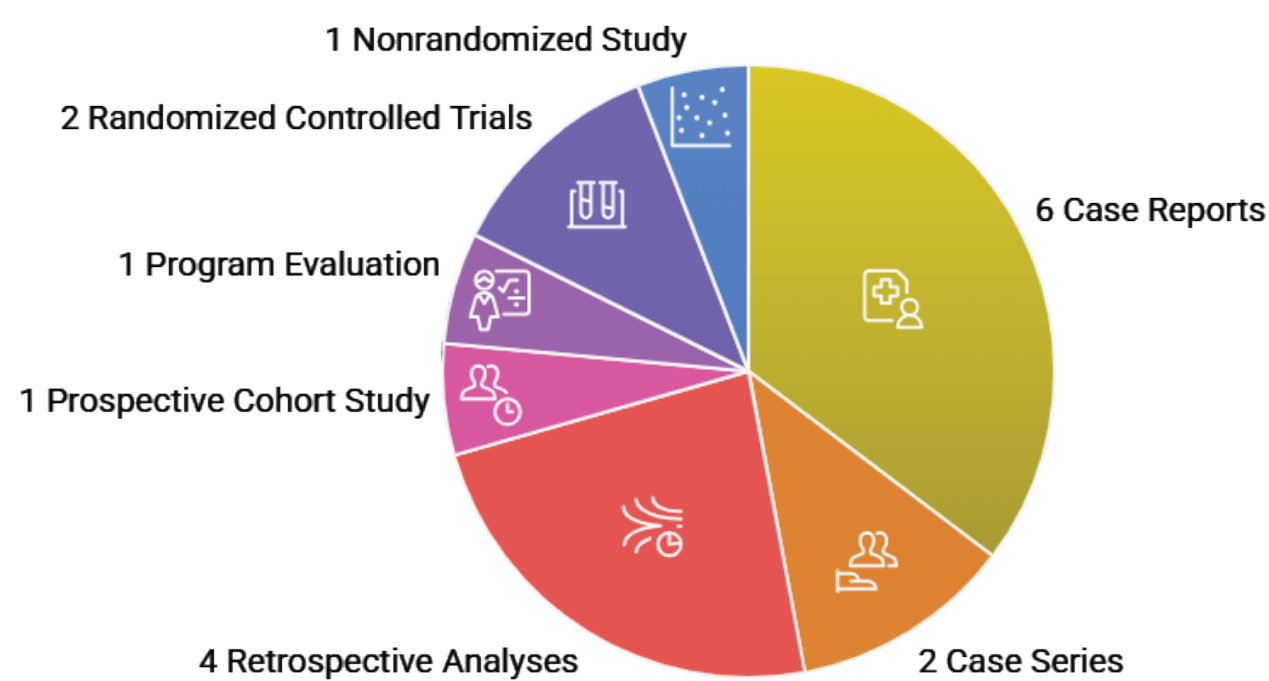
Outcomes included PTSD severity, durability of benefit, and comparison with sham when available.

The procedure is typically performed at the C6 level under ultrasound or fluoroscopic guidance, though alternative approaches include dual-level or bilateral blocks.

Methods

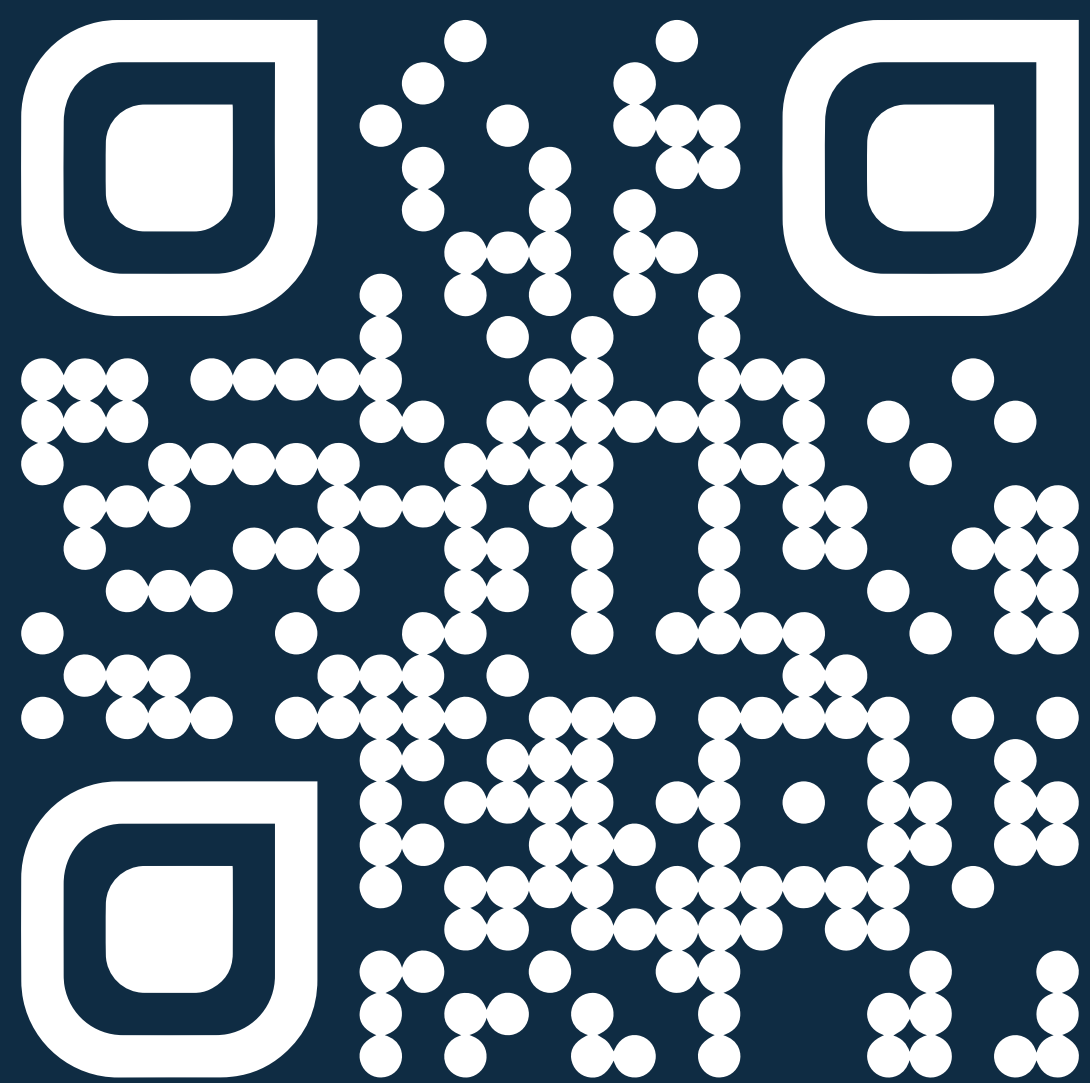
- PubMed review from January 2010 to January 2026.
- 140 records identified.
- 17 studies met inclusion criteria.

Distribution of Study Types in Final Sample (studies)



Cervical sympathetic blockade may reduce PTSD symptoms, but stronger randomized evidence is still needed.

- ✓ Observational Studies: Generally Positive
- ✓ Controlled Trials: Mixed Results
- ✓ Safety: Mostly Mild & Transient Advere Events



- 17 studies included from 140 records
- Randomized evidence was mixed, but one larger trial favored SGB over sham
- Observational studies showed meaningful PTSD symptom reduction



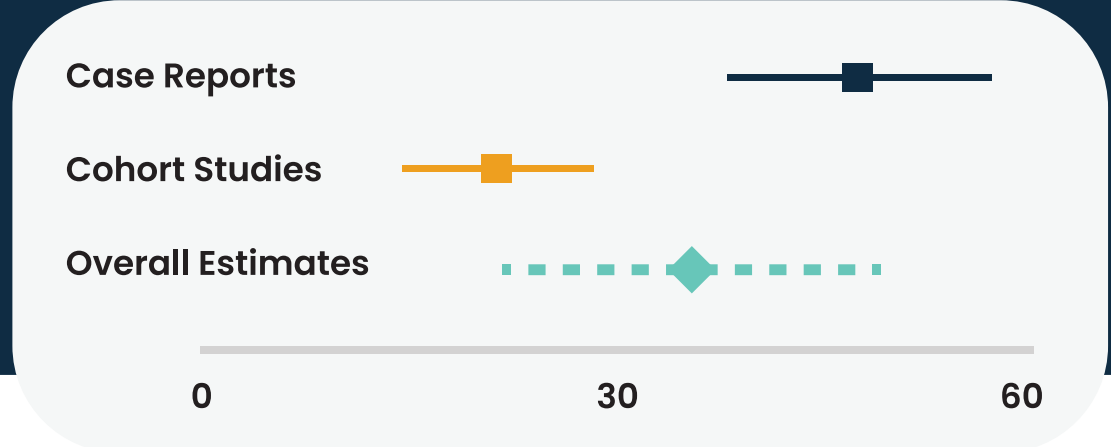
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Clinical Results

Observational data demonstrated moderate-to-large PTSD symptom improvement. Case reports showed consistent PCL score reductions.

PTSD SYMPTOM IMPROVEMENT (PCL REDUCTION)



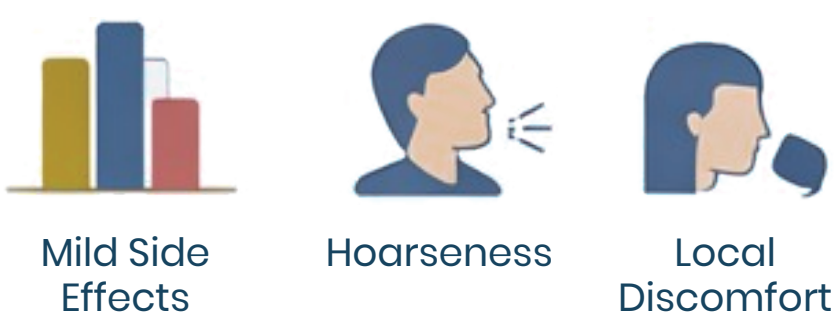
Study Type	PCL Reduction
Case Reports	40 – 60
Cohort Studies	17 – 29
Mean Overall	~38

Key findings

- Mean absolute PCL reduction across studies was ~38
- Several case reports showed 40–60 point reductions.
- Cohort studies often showed 17–29 point reductions.
- Benefit ranged from 1 week to 3–6 months, with some reports up to 12 months.
- Repeat or dual-level blocks may improve response.
- RCT 1: Both SGB and sham improved, with no initial superiority; however, greater symptom reduction was observed after repeat SGB.
- RCT 2: SGB demonstrated superiority over sham, with greater reductions in CAPS–5 scores. 3. in the last part



Safety



Effect: SGB is associated with clinically meaningful reductions in PTSD symptoms.

RCT evidence: Limited; one trial demonstrated superiority over sham.

Technique: Repeat or dual-level blocks may enhance response.

Next step: Larger randomized trials are needed to clarify efficacy, optimal technique, and patient selection.