Adjunctive Stellate Ganglion Block in Special Operations Forces: Six-Month Rehabilitation Outcomes

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Background/Objectives

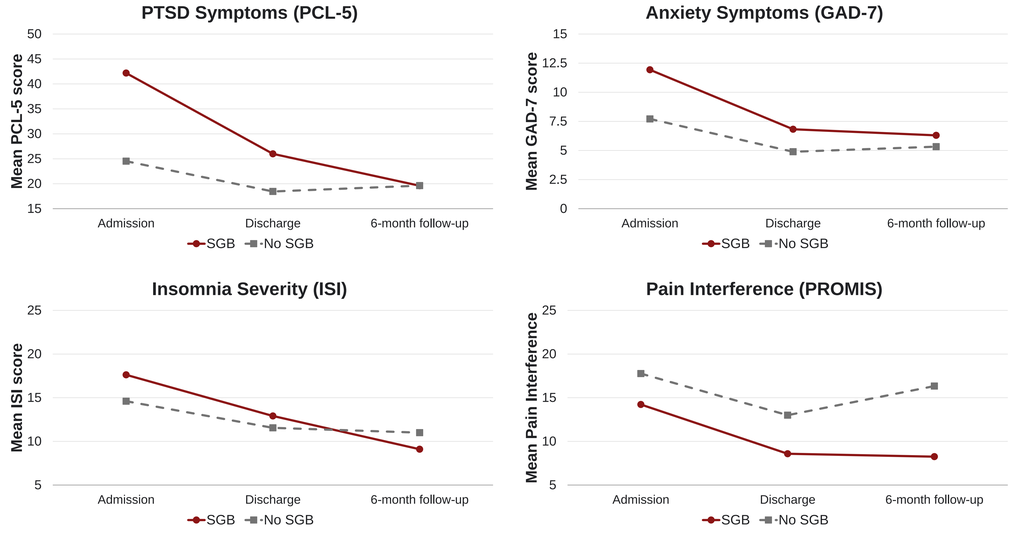
- PTSD, TBI, and chronic pain coexist and are pronounced in the special operations forces (SOF) population and may lead to hyperarousal, sleep disturbance, and functional impairment
- Stellate ganglion block may reduce PTSD symptom severity, with benefits greatest for arousal and reactivity symptoms.
- The added benefit of SGB within a comprehensive interdisciplinary rehabilitation program remains unclear.

Objective: to compare clinical outcomes in SOF personnel who received SGB and those who did not within an interdisciplinary rehabilitation program.

Methods

- Retrospective cohort study of 107 active-duty SOF personnel enrolled in the VA Palo Alto Intensive Evaluation and Treatment Program (IETP, an interdisciplinary residential rehabilitation program) from March 2025 to July 2026.
- Participants received either IETP + stellate ganglion block (SGB) (n=45) or IETP alone (n=62).
- Outcomes were assessed at admission, discharge (3 weeks), and 6-month follow-up using:
  - PCL-5 (PTSD)
  - GAD-7 (anxiety)
  - ISI (insomnia)
  - PROMIS Pain Interference (impact of pain on function)

Symptom Trajectories by Treatment Group



In active-duty special operations forces, adjunctive SGB was associated with greater improvement in PTSD symptoms, anxiety, and pain interference, with benefits sustained through 6 months despite greater baseline symptom burden.

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Results

Outcome	F-Statistic	p-value
PCL-5	17.08	<.001
GAD-7	14.16	<.001
ISI	0.92	.340
PROMIS Pain Interference	37.80	<.001

Discussion

- Adjunctive SGB was associated with greater reductions in PTSD, anxiety, and pain symptoms than interdisciplinary rehabilitation alone, even after adjusting for baseline PTSD severity.
- Improvements were better maintained through 6 months, with the most pronounced difference observed in pain interference.
- Interpretation is limited by the retrospective, nonrandomized design and reduced 6-month follow-up (n=41).
- These findings support further prospective study of SGB as an adjunct for persistent hyperarousal in populations with PTSD.