Stellate Ganglion Blockade for Management of PTSD Symptoms

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Abstract

Theoretical Basis for use in PTSD

Stellate Ganglion Block

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<thead>
<tr>
<th>Symptomatic Input to Hypothalamus and Amygdala</th>
<th>Norepinephrine</th>
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<tbody>
<tr>
<td>↓ Nerve Growth Factor</td>
<td>↓ PTSD Symptoms</td>
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<tr>
<td>Sprouting in CNS Sympathetic Fibers</td>
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Patient Selection

The Post-traumatic Stress Disorder Checklist (PCL) is a 17-item psychometric test commonly used to screen, diagnose, and monitor symptom changes in individuals suspected/diagnosed with PTSD. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items. One study of active duty members returning from combat recommended that a score of 28 was sensitive for the diagnosis of PTSD. Other studies have recommended a score of 50 to optimize both sensitivity and specificity. All patients included in this study had pre-procedure scores >50 and were already diagnosed with PTSD and had severe symptoms and had failed more conventional treatments.

PTSD is a significant problem, especially in the military population. Recent estimates show that one in five of combat deployed soldiers experience PTSD. This underscores need for refinement of current treatment options. The use of Stellate Ganglion Blockade for Management of PTSD Symptoms is investigated in this study.

Efficacy of Current Treatment options for PTSD

Psychotherapy (EMDR, CPT,CBT and PET) 56% 67%
Psychotherapy (Sertraline or Paroxetine) 44% 54%

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Methods

All patients reported receiving a SGB on the right side at the level of C6 using an oblique approach guided by continuous fluoroscopy and 5ml of 0.5% Ropivacaine. The patient’s PTSD symptoms were evaluated using the PCL. This checklist was administered one day prior to treatment and again one week following treatment. The patients were given the PCL at subsequent follow-up visits to quantify sustained benefit. The SGBs were all administered by the same anesthesiologist and the psychometric testing was administered and calculated by mental health providers.

Results

Each of the four patients had significant reduction in their PTSD and anxiety symptoms both subjectively and as measured by the PCL with sustained benefits at one month.

Discussion

The response of these four patient’s represent evidence as to the potential benefit of stellate ganglion block for treatment refractory PTSD. This is the first study to report sustained benefits at one month.

References


Disclosure

The views expressed on this poster are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the US Government.

Eugene G. Lipov, Jaydeeg R. Joo, Sarah Santos, Konstantin V. Steiner; Sean W. Mulvaney, MD; Brian McLean, MD; Jason de Leeuw, PsyD, ABPP: The Use of Stellate Ganglion Blockade for Management of PTSD Symptoms. All patients reported receiving a SGB on the right side at the level of C6 using an oblique approach guided by continuous fluoroscopy and 5ml of 0.5% Ropivacaine. The patient’s PTSD symptoms were evaluated using the PCL. This checklist was administered one day prior to treatment and again one week following treatment. The patients were given the PCL at subsequent follow-up visits to quantify sustained benefit. The SGBs were all administered by the same anesthesiologist and the psychometric testing was administered and calculated by mental health providers. Each of the four patients had significant reduction in their PTSD and anxiety symptoms both subjectively and as measured by the PCL with sustained benefits at one month. The response of these four patient’s represent evidence as to the potential benefit of stellate ganglion block for treatment refractory PTSD. This is the first study to report sustained benefits at one month. The views expressed on this poster are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the US Government.