Complementary/Integrative Approaches to Treating PTSD & TBI

Cathy M. St. Pierre, PhD, APRN, FNP-BC, FAANP
ENRM VA Hospital
Bedford, Massachusetts, USA
The purpose

- To define Post Traumatic Stress Disorder and Traumatic Brain Injury
- Discuss the current approach to treatment of PTSD and TBI
- Review current complementary/integrative approaches to treatment.
- Future research trends
Definition of Post Traumatic Stress Disorder (PTSD)

- PTSD definition has recently undergone some revisions.
Definition of PTSD

• Criteria includes meeting one of more of the following from criterion A,B,C,D,E and F:
Criteria A-Stressor

- The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, as follows: (1 required)
  - Direct exposure.
  - Witnessing, in person.
  - Indirectly, by learning that a close relative or close friend was exposed to trauma. If the event involved actual or threatened death, it must have been violent or accidental.
  - Repeated or extreme indirect exposure to aversive details of the event(s), usually in the course of professional duties (e.g., first responders, collecting body parts; professionals repeatedly exposed to details of child abuse). This does not include indirect non-professional exposure through electronic media, television, movies, or pictures.
Criterion B - Intrusion symptoms

- The traumatic event is persistently re-experienced in the following way(s): (1 required)
  - Recurrent, involuntary, and intrusive memories. Note: Children older than 6 may express this symptom in repetitive play.
  - Traumatic nightmares. Note: Children may have frightening dreams without content related to the trauma(s).
  - Dissociative reactions (e.g., flashbacks) which may occur on a continuum from brief episodes to complete loss of consciousness. Note: Children may reenact the event in play.
  - Intense or prolonged distress after exposure to traumatic reminders.
  - Marked physiologic reactivity after exposure to trauma-related stimuli.
Criteria C-Avoidance

• Persistent effortful avoidance of distressing trauma-related stimuli after the event: (1 required)
  – Trauma-related thoughts or feelings.
  – Trauma-related external reminders (e.g., people, places, conversations, activities, objects, or situations).
Criterion D-negative alterations in cognitions and mood

- Negative alterations in cognitions and mood that began or worsened after the traumatic event: (2 required)
  - Inability to recall key features of the traumatic event (usually dissociative amnesia; not due to head injury, alcohol or drugs).
  - Persistent (and often distorted) negative beliefs and expectations about oneself or the world (e.g., "I am bad," "The world is completely dangerous.").
  - Persistent distorted blame of self or others for causing the traumatic event or for resulting consequences.
  - Persistent negative trauma-related emotions (e.g., fear, horror, anger, guilt or shame).
  - Markedly diminished interest in (pre-traumatic) significant activities.
  - Feeling alienated from others (e.g., detachment or estrangement).
  - Constricted affect: persistent inability to experience positive emotions.
Criterion E-alterations in arousal and reactivity

- Trauma-related alterations in arousal and reactivity that began or worsened after the traumatic event: (2 required)
- Irritable or aggressive behavior.
- Self-destructive or reckless behavior.
- Hyper-vigilance.
- Exaggerated startle response.
- Problems in concentration.
- Sleep disturbance.
Criterions F, G and H

- Criterion F: duration
- Persistence of symptoms (in Criteria B, C, D and E) for more than one month.
- Criterion G: functional significance
  - Significant symptom-related distress or functional impairment (e.g., social, occupational).
- Criterion H: attribution
- Disturbance is not due to medication, substance use, or other illness.
PTSD Diagnosis cont’d

• Full diagnosis is not met until at least 6 months after the trauma(s), although onset of symptoms may occur immediately

• Source: *Diagnostic and Statistics Manual-5* (2013)
Symptoms of PTSD

- Unwanted and repeated memories of the life-threatening event.
- Flashbacks where the event is relived and person temporarily loses touch with reality.
- Avoidance of people, places, sights, or sounds that are reminders.
- Feelings of detachment from people, even family, and emotional numbness.
- Shame about what happened and was done.
- Survivor guilt with loss of friends or comrades.
- Hyper-vigilance or constant alertness for threats.
Traditional Treatment for PTSD

- Medications including: Trazadone, Prasozin, Gabapentin, etc

  Behavioral therapy - stress reduction, cognitive behavioral therapies, traditional counseling.
Traumatic Brain Injury (TBI)
Statistics on TBI

- 1.7 million civilian brain injuries in the United States reported annually.
- >266,000 service members sustained a TBI in the military from 2000-2012.
- TBI has become known as the signature wound of the wars in Iraq and Afghanistan.
- Most brain injuries are mild (>88%) and most people recover in a few weeks or up to one year.

Source: www.brainlinemilitary.org.
Definition of Traumatic Brain Injury (TBI)

• Traumatic brain injury occurs when some type of insult/injury impacts the skull and the brain.

• The trauma usually results in a open/penetrating injury or a closed injury.

• More commonly, is a result of a closed head injury
Closed Head Injury

Whiplash injury
Open Head Injury

Indications of a head injury:
- Scalp wound
- Fracture
- Swelling, bruising
- Loss of consciousness
- Nasal discharge
- Stiff neck
TBI severity

• **Mild, Moderate or Severe TBI**

• Mild can be subtle and go undetected

• Moderate and Severe are more life threatening and patient needs to be assessed and stabilized quickly.

• The level of TBI is defined based on the history of trauma, level of consciousness and post traumatic amnesia.
## TBI Severity Classification

<table>
<thead>
<tr>
<th></th>
<th>AOC*</th>
<th>LOC**</th>
<th>PTA***</th>
<th>Structural Imaging****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>&lt; 24 hrs</td>
<td>0-30 min</td>
<td>&lt; 24 hrs</td>
<td>normal</td>
</tr>
<tr>
<td></td>
<td>Mild 1</td>
<td>Mild 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>&gt; 24 hrs</td>
<td>&gt; 30 min but</td>
<td>&gt; 24 hrs but</td>
<td>Normal/ Abnormal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;24 hrs.</td>
<td>&lt;7 days</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>&gt; 24 hrs</td>
<td></td>
<td>&gt;7days</td>
<td>Normal/ abnormal</td>
</tr>
</tbody>
</table>

* AOC = Alteration of Consciousness

** LOC = Loss of Consciousness

*** PTA = Post Traumatic Amnesia

**** Imaging: CT or MRI
Common symptoms of TBI

- Headaches
- Dizziness
- Loss of balance
- Cognitive issues: memory deficits, completing tasks, decision making skills, etc.
- Poor attention span
- Fatigue/sleep issues
- Depression/anxiety
- Irritability
Traditional Treatments for TBI

• Medication management for:
  – Headaches
  – Insomnia
  – Depression/anxiety

• Behavioral therapies such as: Cognitive behavior therapy, counseling, stress reduction,
Why PTSD and TBI

- Known as the “Invisible wounds” of Iraqi and Afghanistan war.
- 19% of veterans may be affected by TBI
- >20% of Iraq and Afghanistan vets have PTSD
- 7% of veterans suffer with both PTSD and TBI.
- Higher rate of suicide among veterans with PTSD +/- TBI.
### Potential TBI vs. PTSD Symptom Overlap

<table>
<thead>
<tr>
<th>PTSD</th>
<th>PTSD/TBI</th>
<th>TBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashbacks</td>
<td>Attention problems</td>
<td>Headaches</td>
</tr>
<tr>
<td>Nightmares</td>
<td>Depression</td>
<td>Dizziness</td>
</tr>
<tr>
<td></td>
<td>Irritability</td>
<td>Irritability</td>
</tr>
</tbody>
</table>
The Following Summary tables are based on Data from a Report to the United States Congress by the Department of Defense (2011).
Complementary treatments for PTSD

- Acupuncture
- Meditation
- Mantram Repetition
- Biofeedback
- Yoga
CIM treatments utilized for TBI

- First study summary is by Gau et al (2012) published in the British Medical Journal
- Second set of summary tables are based on a Report to the United States on the use of CIM in the Military Health System (2011).
CIM used to treat TBI

- Biofeedback
- Botox Injections
- Acupuncture
- Yoga
- Alpha Stimulation
- Qigong
- Massage
- Hyperbaric oxygen
- Drumming classes
- Tai Chi
- Visual arts
- Horticultural therapy
- Therapeutic pets
CIM offered within American Military Health System

- Acupuncture
- Biofeedback
- Chiropractic
- Hypnosis
- Meditation
- Yoga
- Hyperbaric Oxygen for TBI
Complementary Treatments for TBI

- Gau et al (2012) surveyed Traumatic Brain Injury patients regarding their use of Complementary/Integrative Modalities (CIM) and found the following results (N=101):
<table>
<thead>
<tr>
<th>Most Common CIM used following TBI.</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Chinese Medicine</td>
<td>37</td>
<td>57.8</td>
</tr>
<tr>
<td>Folk &amp; religious Therapy</td>
<td>30</td>
<td>46.9</td>
</tr>
<tr>
<td>Dietary Supplements</td>
<td>30</td>
<td>10.9</td>
</tr>
<tr>
<td>Mind-Body med.</td>
<td>7</td>
<td>10.9</td>
</tr>
<tr>
<td>Herbal Therapy</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>Chinese Herbs</td>
<td>30</td>
<td>46.9</td>
</tr>
<tr>
<td>Spiritual healing</td>
<td>21</td>
<td>32.8</td>
</tr>
<tr>
<td>Special diet</td>
<td>17</td>
<td>26.6</td>
</tr>
<tr>
<td>Megadose Vitamins</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Buddhist mantra, Holy water</td>
<td>15</td>
<td>23.4</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>14</td>
<td>21.9</td>
</tr>
</tbody>
</table>
Questions?


Resources

- www.brainlinemilitary.org
- www.dvbic.org
- www.bia.org
- www.pstd.gov
- www.nccam.gov