Traumatic Brain Injury & Special Issues in the Veteran Population

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Presentation Team

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- Special thanks to **Shari Wade**, PhD Cincinnati Children’s Hospital Medical Center.
Agenda

- Who is the Veteran?
- War injuries
- Traumatic Brain Injury (TBI)
- Post Traumatic Stress Disorder (PTSD)
Agenda

- Resilience
- Cognitive Intervention
- Questions
- Hand-out: Community Resources
Who is the veteran?
When you see someone in uniform what is your personal reaction or experience?
Not all veterans are alike

- **Individual reactions to war trauma may be quite varied**, representing everything from being **significantly troubled** by their war time duty, to being **very philosophical or reflective**.
War Injuries
OEF/OIF Combat Injuries

- 20% of returning OEF/OIF veterans report experiencing a TBI
- 60% of wounded in action (WIA) are blast-related injuries
- Many service members sustain complex injuries (polytrauma)
- High prevalence of PTSD with and without a TBI

Traumatic Brain Injury (TBI)
Blast vs. Blunt Force

- Mechanism of Injury
  - Blunt Force/Coup Contrecoup

- Blast
  - Results from high-order (HE) explosions
  - High pressure shock wave, then a blast wind
  - Pressure effects result in damage to organs
  - Many IED’s contain metal and other fragments
Military TBI Statistics

DoD Numbers for Traumatic Brain Injury

Total TBI Diagnoses

Source: Armed Forces Health Surveillance Center
Updated 10 Feb 2012
Military TBI Statistics

Incidence by Severity

DoD Numbers for Traumatic Brain Injury

No. of cases

30,000

25,000

20,000

15,000

10,000

5,000

0

Calendar year

'00

'01

'02

'03

'04

'05

'06

'07

'08

'09

'10

'11

Mild

Moderate

Severe

Penetrating

Unclassified

Source: Armed Forces Health Surveillance Center

Updated 10 Feb 2012
Military TBI Statistics

DoD Numbers for Traumatic Brain Injury

Incidence by Armed Forces Branch

Source: Armed Forces Health Surveillance Center
Updated 10 Feb 2012
TBI Symptoms
# Acute Post-Injury TBI Symptoms

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<th><strong>Behavioral/Emotional</strong></th>
<th><strong>Cognitive</strong></th>
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<td>Sleep disturbance</td>
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<tr>
<td>Dizziness</td>
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<td>Nausea/vomiting</td>
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<td>Vision problems</td>
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<td>Transient neurologic problems</td>
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<tr>
<td>Seizures</td>
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<tr>
<td>Balance problems</td>
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VA/DOD EBP Guideline, 2009
Neurobehavioral Symptoms Inventory

- Feeling dizzy
- Loss of balance
- Poor coordination
- Headache
- Nausea
- Vision problems
- Sensitivity to light
- Hearing difficulties
- Sensitivity to noise
- Numbness/tingling
- Change in taste/smell
- Loss/increase in appetite
- Poor concentration

- Forgetfulness
- Difficulty making decisions
- Slowed thinking/poor organization/can’t finish things
- Fatigue/loss of energy
- Difficulty falling/staying asleep
- Feeling anxious or tense
- Feeling depressed or sad
- Irritability, easily annoyed
- Poor frustration tolerance, feeling easily overwhelmed by things
PTSD
Likelihood of developing PTSD after a trauma may depend on the following:

- **How intense** the trauma was or how long it lasted
- **If someone was hurt** or if someone close to the individual was hurt
- **How close** someone was to the event
- **How strong** their reaction was to the event
- **How much control** they felt they had in the event
- **How much help and support they received after** the event
Resolution of Symptoms

- The majority of acute symptoms resolve in most service members.
- However, some symptoms may persist.
- Symptoms may be managed well or with maladaptive behaviors.
TBI

- Dizziness
- Balance Problems
- Headache
- Memory Problems
- Light Sensitivity

PTSD

- Nightmares
- Avoidance
- Hypervigilance
- Re-experiencing
- Sensitive to Noise

Sleep Problems (Insomnia or Excessive Sleeping)

- Difficulty Concentrating

Sadness

- Appetite changes
- Fatigue

Little Interest

- Hopelessness
- Withdrawn from others

Irritability

- Anger
- Emotional Regulation
- Cognitive Dysfunction

Emotional Numbing

Depression


Response to trauma is influenced by resilience

- Individuals' are born with varying degrees of resilience.
- However, resilience is also supported by many facets of the veteran’s current lifestyle.
- Ongoing support can lead to full recovery and reintegration into civilian life.
Examples of Resilience

- Adaptable
  - I am able to adapt to changes
  - Under pressure, I focus and think clearly

- Relationships
  - I have close and secure friends
  - My family is willing to help me makes decisions and listen to me

- Goal Oriented
  - I work to attain my goals
Foundational components of individual resilience

- Maintain a Positive Outlook
- Make Meaning out of Challenge
- Maintain a Spiritual Connectivity
- Have a Flexible View of Success
- Seek Resources/Assistance
- Communicate Clearly
- Identify and Communicate Feelings
- Life Engagement
Comprehensive Soldier Fitness

- Emotional
- Family
- Physical
- Social
- Spiritual
Application of Resilience Theory to TBI

- Assists families in understanding that whole-family emotional responses are a normal part of post-injury functioning.
- Allows family to focus on post-injury gains rather than comparing to pre-injury functioning.
- Creates understanding between family members and survivors around post-injury behavior and personality changes.
- Promotes development of new ways of achieving goals and defining success.
Conclusions from a recent study Maestas (2014) on Resilience

- Resilience is associated with **reduced anxiety and improved participation outcomes**

- Recommendations include
  - allocate resources to assess resilience in interprofessional rehabilitation efforts
  - target resilience in future interventions to improve anxiety and participation outcomes following TBI.
Cognitive Intervention
Examples of Problems Common to TBI Survivors (Kennedy & Krause, 2010)

- Time Management - I have trouble managing my time.

- Studying and Learning - I forget what has been said in class or in my job training.

- Relating to Others - I have fewer friends than before.
Approaches to Intervention

- Cognitive-behavioral/metacognitive strategies
- External aids/organizers
- Community reintegration/ecological approaches
- Cognitive remediation/direct training
- Pharmacological
- Hybrid approaches
Cognitive Intervention

- A variety of approaches for treatment of mild TBI & PTSD given the professional discipline

- Many approaches are overlapping or complimentary. For example…
  - The clinical speech-language pathologist may assist the veteran to employ strategies and develop goals to attain them.
  - Clinical psychologists may help a veteran to consider realistic goals viewed from a new perspective (cognitive therapy).
Cognitive intervention results in web-based videophone treatment adherence and improve cognitive scores.


Riegler LJ, Neils-Strunjas J, Boyce S, Wade SL, Scheifele PM.

BACKGROUND:

We report findings from an intervention study using telehealth modalities to determine whether provision of telehealth services can improve access to care and increase adherence to cognitive therapy in veterans with mild traumatic brain injury (TBI) while matching traditional care in terms of outcomes.
Livescribe 2 GB Echo Smartpen (APX-00008) & Livescribe ANA-00018 Single Lined 100 Page 5-8 Notebook (Spiral-Bound)

Cost: $109.87

Cost: $27.38
Assisting the Veteran with Cognitive & Social-Emotional Challenges

- It might be very obvious that the veteran is struggling with a variety of concerns, and it would be totally appropriate to attempt to determine the extent of their distress.

- Learn about the services on campus or in the community, and let the veteran know there are places and people who are dedicated to helping make things easier for them.
Assisting the Veteran with Cognitive & Social-Emotional Challenges

• If any veteran seems to be severely depressed, suicidal, or appears to be having other significant problems, it is important for them to seek consultation.

• Recommend that they call the VA Medical Center at 1-800-273-8255.

References


References


Availability: Web-Only

Pages: 58


Year: 2009
References

United States Department of Defense (2012). Retrieved from:

http://www.defense.gov/home/features/2012/0312_tbi/