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Post Traumatic Stress Disorder

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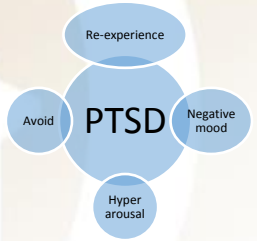
Introduction

Posttraumatic stress disorder (PTSD) can occur after witnessing or experiencing a terrifying event (Mayo Clinic, 2015). PTSD can manifest in a variety of symptoms including, nightmares, flashbacks, insomnia, irritability, and anger (Mayo Clinic, 2015). The extended combat engagement in Afghanistan and Iraq have caused many casualties for American service members, both physically and mentally. The Veterans Affairs (VA) stated that 476,515 people sought treatment for PTSD in 2011 alone (Veteran Affairs, 2014).

The veterans returning home from combat require adequate services to support their transition to civilian life. Barriers may exist for those members with PTSD symptoms seeking treatment. The healthcare system must have an understanding of the unique set of psychological problems that veterans face to provide proper treatment. The disparity that exists between PTSD patients and treatment is a gap worth closing. The lack of identification of symptoms, availability of treatment, and overall failure to support veterans in need can have drastic results. A large population of the country knows of a veteran that has served in combat, or has served themselves. The author served as a United States Marine deployed in combat and also has family currently battling with PTSD and other psychiatric issues related to experiences in war. The treatment of veterans and others with psychiatric conditions, can be related by nursing staff in many different specialties. The acute psychosis seen in the emergency department or the overwhelming depression in the long term care facilities should be treated appropriately. Patient care will improve when healthcare providers and workers have a more knowledgeable understanding of PTSD.

Signs and Symptoms

PTSD is the chronic anxiety disorder that follows exposure to an overwhelming traumatic event (Dunlop, Rothbaum, Binder, Duncan, Harvey, Jovanovic, Kelley, Kinkead, Kutner, Iosifescu, Mathew, Neylan, Kilts, Nemeroff & Mayberg, 2014). PTSD is historically linked with combat veterans, but can also manifest in patients that experience other types of traumatic events (Warner, Warner, Appenzeller & Hoge, 2013). Recognizing the presentation of PTSD in a patient is an important element in developing an evidence based treatment plan. PTSD develops with four main symptoms; re-experiencing the event or intrusion, avoidance of people, places, or things that elicit the memory, negative mood changes and thoughts associated with the event, and chronic hyperarousal symptoms (Warner et al., 2013). Distinction between PTSD and other psychiatric conditions can be made based on the symptoms and duration. Acute stress disorder has similar symptoms to PTSD but includes dissociation and is limited to one month duration (Warner et al., 2013). The *Diagnostic and Statistical Manual of Mental Disorders* (DSM) previously required the patient to have a sense of helplessness during the traumatic event to diagnosis PTSD (Warner et al., 2013). The DSM responded to the recent evidence that military members and first responders did not report signs of helplessness when they experienced traumatic events (Warner et al., 2013).



Underlying Pathophysiology

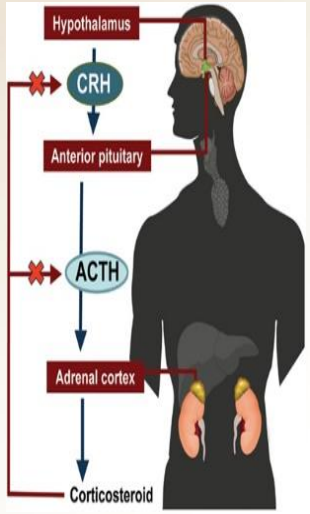
A definite pathophysiological cause for PTSD is not known at this time. There is an increasing amount of research that suggests PTSD is associated with the chronic increase of central nervous system circuits that utilize corticotropin releasing hormone (CRH) (Dunlop et al., 2014). During a stress response the CRH level increases which activates the hypothalamic-pituitary-adrenal (HPA) axis thus releasing cortisol and other adrenal steroids (Dunlop et al., 2014). These are the same type of hormones associated with the adrenaline surge during the fight or flight response. Increased activity of CRH containing neurons in the amygdala are known to activate fear related behaviors, while neocortical CRH can reduce the expectation of rewards (Dunlop et al., 2014). CRH release produces anxiety-like behavior consistant with PTSD such as sleep disturbance, enhanced acoustic startle response, and increased conditioned fear response (Dunlop et al., 2014).

Another body of research suggests that pituitary adenylate cyclase-activating polypeptide (PACAP) has a role in PTSD and other human stress responses (Ressler, Mercer, Bradley, Jovanovic, Mahan, Kerley, Norrholm, Kilaru, Smith, Myers, Ramirez, Engel, Hammack, Toufexis, Braas, Binder & May, 2011). PACAP functions in development, cell signaling, metabolism, homeostasis, and cell protection as well as regulation of CRH (Ressler et al., 2011). Increased blood levels of PACAP have been associated with the diagnosis of PTSD during two separate but similar studies (Ressler et al., 2011). The levels of PACAP were found to correlate directly to the differential response of avoidance, intrusive re-experience, and hyperarousal in the subjects of the study (Ressler et al., 2011). PACAP continues to be related to cellular stress response since identification more than 20 years ago (Ressler et al., 2011). The complete role of the PACAP system in behavioral stress response is yet to be discovered (Ressler et al., 2011). The pathophysiology of PTSD is complicated with a variety of contributing factors. Advances in the research will enable providers and patients to deal with the devastating effects of the condition.

Significance of Pathophysiology

The full pathophysiology of PTSD is not completely understood at this time. There is ongoing research, both privately and publicly funded, to gain more insight on the disorder. The Iraq and Afghanistan wars have brought the disorder to the forefront due to the overwhelming number of veterans who suffer the effects. The bodies physiological response to PTSD is better understood than the pathophysiology of the actual disorder. A recent study found a link between combat veterans with PTSD and the diagnosis of hypertension (Paulus, Argo & Egge, 2013). The PTSD subject group had similar percentages of smoking and substance abuse as the non-PTSD group, yet they had much higher rate of hypertension and increased resting heart rate (Paulus et al., 2013). Evidence has suggested that norepinephrine, which is chronically elevated in PTSD, has led to structural and functional changes in the cardiovascular system as expressed by an increase in heart rate and blood pressure (Paulus et al., 2013).

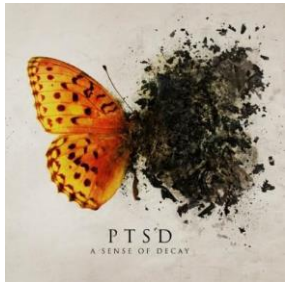
A study was conducted of 109 veterans with PTSD which revealed a majority of the subjects met the criteria for bipolar disorder (BPD) utilizing the Mini International Neuropsychiatric Interview (MINI) (McLay, Ram, Webb-Murphy, Baird, Hickey & Johnston, 2014). The study was concerning because a diagnosis of BPD would prevent a person from entering military service which would suggest the men developed BPD while in service. The authors of the study were quick to point out that, upon reassessment at follow up appointments, all subjects were found to be free of BPD (McLay et al., 2014). This finding should challenge the method of assessing patients for mental illness, especially those with preexisting PTSD. The study suggests that patients with PTSD must be assessed differently to prevent over diagnosing a comorbid condition such as BPD (McLay et al., 2014).



(Ross, Ben-Zacharia, Harris & Smrtka, 2013)

Implication for Nursing

The treatment modalities for PTSD can be tailored for the patient to manage individual symptoms. The treatments may include pharmacological, psychotherapy, yoga, and acupuncture (Warner et al., 2013). Studies have improved the pharmacological treatment of PTSD. The U.S. Food and Drug Administration approved the use of sertraline and paroxetine for treatment of PTSD (Warner et al., 2013). The use of selective serotonin reuptake inhibitors and serotonin-norepinephrine reuptake inhibitors are considered first-line therapy for symptoms of PTSD (Warner et al., 2013). Providers should know that the use of benzodiazepines will treat the hyperarousal symptoms but can exacerbate other symptoms (Warner et al., 2013). The use of antihistamines and hypnotics such as Ambien or Sonata may be used in short durations to help with insomnia (Warner et al., 2013). Mood stabilizers have mixed reviews in treatment of PTSD and should be used on a case by case basis according to studies (Warner et al., 2013). The overwhelming evidence does show that antipsychotics are not recommended for treatment of PTSD. The knowledge of proper pharmacology for the treatment of PTSD will benefit the provider and the patient alike. The symptom management in PTSD can effectively prevent veteran suicide and promote regaining control over their physical and mental health.



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