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Pharmacotherapy of Combat-Related Post Traumatic Stress Disorder

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A number of veterans from Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) are returning home with signs of combat-stress-related Post Traumatic Stress Disorder (PTSD). In a recent study, 16.6% of the soldiers met the screening criteria for PTSD. On average, they showed a significant increase in sick visits, missed workdays, severity of somatic symptoms, and poorer overall health (Hoge et al., 2007). In another study, the youngest age group, 18–24 years, was at greater risk than veterans 40 years of age or above. Diagnosis was made early (median of 13 days), and most of them were detected in primary care clinics (Seal et al., 2007).

Upon return from the war zone, veterans frequently report intrusive thoughts, flashbacks, increased vigilance, avoidance of social situations, hyperarousal, and nightmares. Treatment involves integration of mental health, primary care, physical medicine, attention to substance abuse, and vocational services. The mental health portion involves an initial screening of the combat veteran for PTSD and other mental illnesses, followed by a full assessment. Both pharmacotherapy and psychotherapy (individual, couple, and group) are offered for treatment.

From a pharmacological perspective, several studies have found the traditional anti-depressants effective in PTSD. Selective serotonin reuptake inhibitors (SSRIs), such as sertraline (Zoloft®), paroxetine (Paxil®), and fluoxetine (Prozac®), have been studied extensively for PTSD, and sertraline and paroxetine have been approved by the Food and Drug Administration for PTSD. SSRIs have been found to be effective both in short-term trials and long-term maintenance treatment for relapse prevention (Asnis et al., 2004). However, earlier studies have focused mainly on PTSD secondary to interpersonal trauma in a civilian setting. In a multicenter study, venlafaxine extended release (Effexor XR®), a serotonin norepinephrine reuptake in-

hibitor, was found to improve both the re-experiencing and the avoidance symptoms of PTSD, but not hyperarousal. The drug was effective and well tolerated in both short-term and continuation treatment of PTSD (Davidson et al., 2006). In a small study, mirtazapine (Remeron) was found to be effective in both short-term and continuation treatment of combat-related PTSD without any serious side effects (Kim et al., 2005). In addition, sedation from mirtazapine can even prove beneficial in improving sleep in PTSD. In a randomized trial comparing phenelzine (a monoamine oxidase inhibitor) and imipramine (a tricyclic antidepressant), both significantly reduced combat-related PTSD symptoms (Kosten et al., 1991). Benzodiazepines are used in PTSD for panic attacks or anxiety states. They provide temporary relief but run the risk of tolerance and addiction.

Veterans with PTSD find it hard both to fall asleep and to maintain sleep because of hyperarousal and vivid nightmares related to combat. Significant others often report that patients scream in their sleep and may even wake up soaked in sweat. Prasozin and clonidine both decrease the central nervous system's noradrenergic activity. They have been found to be effective in decreasing hyperarousal symptoms and improving sleep (Boehnlein, 2007). Other drugs used for sleep are the benzodiazepine class of drugs, such as temazepam, and non-benzodiazepines, such as zolpidem (Ambien™) and ezopiclone (Lunesta™). However, caution must be taken regarding the habit-forming potential of these drugs (Bhagar and Schmetzer, 2006).

The presence of psychotic symptoms in PTSD can further complicate the clinical picture. In one study, 20% of the 91 males with combat-related PTSD were found to be suffering from hallucinations and delusions, and hyperarousal was positively associated with the occurrence of psychotic symptoms (Kastelan, 2007). In a small study, augmentation of SSRIs with olanzapine (Zyprexa), an atypical antipsychotic was effective in treating SSRI-resistant combat-related PTSD symptoms, especially sleep (Stein, 2002). In another study, monotherapy with typical or atypical antipsychotics reduced both PTSD and psychotic symptoms, and antipsychotics seemed to offer another approach to treat the psychotic subtype of combat-related PTSD resistant to previous antidepressant therapy (Pivac, 2006).

Overall, PTSD pharmacotherapy involves several drugs based on our experience with PTSD in general, but well-designed studies are needed to establish treatment guidelines specifically for combat-related PTSD.

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The authors have nothing to disclose.

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