



## CASE REPORT ON POST TRAUMATIC STRESS DISORDER

Supriya.Ch\*, Suneetha.A, Venkata Krishna.B, Nandini.M, Gopi Praveen.  
G, Naga Venkata, Prasanna.J.

KVSR Siddhartha College of Pharmaceutical Sciences (Autonomous),  
Affiliated to Krishna University, Vijayawada, Andhra Pradesh 520008

\*Corresponding author E-mail: supriya.chatla@gmail.com

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### ABSTRACT

Posttraumatic stress disorder (PTSD) is a mental disease caused by an experience or witnessing of a traumatic event. A 24 year old female patient was admitted to the hospital having a depressed mood, suicidal thoughts, interpersonal difficulties, nightmares all over for past 3 months. Additionally, she also reported sleeping problems, increased anxiety and poor concentration over the past 2 months. His MRI investigations showed reduction of hippocampus volume. Based on clinical assessment and imaging findings a diagnosis was made of PTSD. Treatment of this symptom of PTSD was given by treatment with Clonazepam (30 mg/day), Paroxetine (20 mg/day) and CBT. PTSD has no curative effect. Symptoms of this disorder can be successfully managed to allow the person to regain full functioning.

### INTRODUCTION

Posttraumatic Stress Disorder (PTSD) is a condition of the mind when a person experiences, or witnesses a traumatic, frightening, or life-threatening event. Typical symptoms include: flashbacks, nightmares, intense anxiety, and intrusive thoughts which relate to the traumatic event. The symptoms are classified generally into four categories: intrusive memories, avoidance behaviors, negative changes in thinking and mood, and altered physical and emotional responses. The intensity of the symptoms, and how they present, can change over time and within the same individual.

#### CAUSES:

PTSD may be due to direct exposure to, witnessing or learning about a traumatic event (namely actual or threatened death, serious injury or sexual violence). The exact cause of

PTSD is not fully understood, but is thought to involve a combination of causes including:

- Exposure to highly stressful or traumatic experiences
- Genetics ( generally a family history of anxiety or depression )
- Personality traits, often referred to as temperament
- Neurobiological responses ( in other words, the way the brain controls stress - related hormones and chemicals)<sup>(2)</sup>.

Neurochemical imbalances, particularly in the central serotonergic system of the brainstem (including the medial and dorsal raphe nuclei), have been implicated in PTSD; dysfunction of serotonin receptors, such as 5-HT1A and 5-HT1B, may contribute to symptoms of PTSD, such as intrusive thoughts and impulsiveness.<sup>(3)</sup>

Specific brain regions are also associated with PTSD and the physical responses in the rest of the body.

**Amygdala:** Helps to detect danger and initiate the body's response to stress. Consistently responsible for emotional regulation and fear processing.

**Hippocampus:** involved in formation and consolidation of memory. Abnormal function or constrained volume in this area is common in people with PTSD associated with abnormal processing of traumatic events in the memory. (4).

**To diagnose post-traumatic stress disorder, your doctor will likely:** Physical Examination to rule out other medical condition that may be causing symptoms Suggest psychological evaluation of the patient's symptoms and discussion about the trauma that might have caused them. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), published by the American Psychiatric Association (2), PTSD is diagnoses based on a set of specific clinical criteria related to: exposure to trauma; intrusive symptoms; avoidant behavior; negative mood or cognitive changes; an increase in arousal or reactivity; and persisting or prolonged symptoms of greater than one month duration and for at least significant daily functioning.

**Brain Imaging and Neurobiological Findings:** PTSD may be caused by a physiological or environmental shock that can have a profound effect on the brain. MRI (Magnetic Resonance Imaging) and PET (Positron Emission Tomography) scans are very effective tools for understanding the physical changes caused by PTSD. PET scans of people suffering from PTSD show changes in how the brain is able to store and process memories. PTSD has been well documented but is not clear if these changes can be reversed.

**PSYCHOTHERAPY:** Psychotherapy is often used as a primary treatment for PTSD in children and adults. Some general treatments include:

**Cognitive therapy:** This style of therapy helps individuals identify and challenge negative thought patterns, such as discredited ideas about themselves or perceived ongoing threats.

The technique is often used in conjunction with exposure therapy to achieve an even greater effect.

**Exposure therapy.** Behavioral therapy that allows individuals to gradually confront trauma-related situations or memories in a safe environment. It helps people become more acclimatized to fear triggers, especially in treating flashbacks and nightmares. Virtual reality may also be used to re-enact traumatic experiences in order to gain therapeutic insight. Eye movement desensitization and reprocessing (EMDR). EMDR is the combination of exposure therapy and eye movements to help people reprocess and modify their emotional response to traumatic memories.<sup>(5)</sup>.

#### **PHARMACOLOGICAL TREATMENT:**

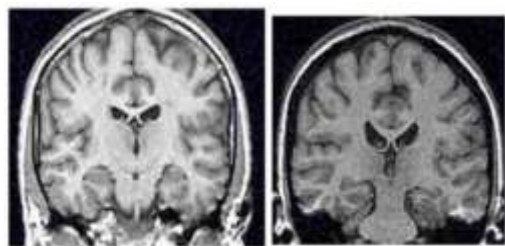
**Medications:** Medications Commonly Used in PTSD Management:

**Antidepressants:** Selective serotonin reuptake inhibitors (SSRI) such as sertraline (Zoloft) and paroxetine (Paxil) are FDA-approved medications for treating PTSD (depression, anxiety, sleep problems, poor concentration).

**Anti-anxiety medications:** They are taken to treat acute anxiety and any associated symptoms. Because of its potential for dependence, they're usually only taken for short periods of time under supervision.

**Prazosin.** Historically, this drug has been found to help reduce nightmares that arise from PTSD. Recent studies however, have shown mixed results for it's effectiveness. So a patient should always talk to their doctor about whether it is right for them to try prazosin for them.<sup>(6)</sup>.

**CASE PRESENTATION:** Twenty four years female patient visited hospital with complaints of depressive mood, suicidal ideas, relation problems, nightmares since 3 months. She also complained sleep disturbances, anxiety and poor concentration since 2 months. On Physical examination: Patient displaying symptoms like: Tremors, Sweating, Fear and Anxiety. On lab investigations MRI shows Hippocampus volume on MRI in PTSD. Smaller hippocampus Volume in a representative patient with PTSD (right) relative to a non-PTSD subject (left) in the below fig 1



**Figure:1 Hippocampal volume on MRI in PTSD**

**DISCUSSION:** As you can see from the case it describes the clinical presentation and treatment for PTSD. You probably have experienced fear either during or after a traumatic event. Fear is when the body activates the fight or flight response to protect against danger. Most people get over their initial symptoms of fear after having gone through normal life changes, but others persist with ongoing symptoms and some develop PTSD. The disorder has been identified in the past by different names, such as shell shock (as it was called during World War I) and combat fatigue (after World War II). PTSD is not confined to combat veterans and can affect anyone at any age, gender, ethnic background, or cultural background. In the U.S. approximately 3.5% of adults experience PTSD annually, and around 8% of adolescents aged 13 to 18 in the United States will experience PTSD in their lifetime.(5) As a whole, about one in 11 people will experience PTSD in their lifetime. Women are twice as likely as men to develop PTSD. Symptoms of Post Traumatic Stress Disorder may continue with intense distressing emotions and thoughts even after the event(s) have passed on. The most common symptoms are flashbacks, nightmares, emotional numbness, and avoidance of people or situations that trigger memories of the trauma. Some everyday stimuli, such as loud noises or accidental contact, may cause strong reactions in those with PTSD. Depends on how serious and long lasting the symptoms are. Treatment could be: Watchful waiting, to monitor whether symptoms resolve without intervention Pharmacotherapy, including antidepressants like Paroxetine or Sertraline Psychiatry in addition to trauma-focused CBT

or Eye Movement Desensitization and Reprocessing (EMDR) Given the available treatments, however, a large proportion of PTSD sufferers do not obtain appropriate care. This provision gap persists particularly in low- and middle-income countries, where chronic traumatic events (such as conflict, natural disasters, or humanitarian crises) are common yet sufferers also face very limited mental health resources. One of the global challenges is ensuring access to evidence-based treatment approaches within a globally responsive budget. In fact studies show that 50% to 90% of people will experience at least one traumatic event in their lifetime, but the lifetime prevalence of PTSD in the U. S. is about 8%. Neurobiological changes (particularly in the amygdala and hippocampus) are believed to be responsible for the development and persistence of the disease (9). In most high-risk occupations (the military, emergency medical services (EMS), and law enforcement) employer may offer preventative measures, such as stress management training or counseling. In EMS settings, there is often a structured process called Critical Incident Stress Management (CISM) offered after traumatic events to reduce the risk of post-traumatic stress disorder (PTSD) and other stress-related disorders. (10)

#### **CONCLUSION:**

In this case report, young female patient was diagnosed with Post traumatic stress disorder. PTSD may occur at any age, even in childhood. Symptom duration is variable and is affected by the proximity, duration, and intensity of the trauma, as well as co morbidity with other psychiatric disorders. In this case post-traumatic stress disorder was diagnosed in early stages, if it left untreated the symptoms may worsen and sometimes suicidal thoughts may lead them to end their life. Proper and early stage diagnosis may help in providing better care, treatment and support for the patient.

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