Mini Review

iMedPub Journals
www.imedpub.com

Medical and Clinical Reviews
ISSN 2471-299X

2021
Vol.7 No.8:151

Pharmacotherapy of Psychotic Symptoms in Post-traumatic Stress Disorder

Alan Dubro*

Department of Behavioral Science, Montefiore Medical Center, Bronx, NY, USA

Abstract

Psychotic symptoms may be relatively prevalent in posttraumatic stress disorder (PTSD). In the DSM, psychotic symptoms are included in the definition for re-experiencing symptoms, i. e., sudden acting or feeling as if the trauma was recurring. These symptoms may include illusions, hallucinations, and dissociative flashback episodes. These symptoms do not occur exclusively during dissociative flashback episodes and are often chronic in nature. If delusions do occur, they are primarily paranoid or persecutory in nature.

Keywords: Post-traumatic Stress Disorder; Psychotic Symptoms; Hallucinations

Received: August 05, 2021; **Accepted:** August 20, 2021; **Published:** August 27, 2021

***Corresponding author:**
Alan Dubro

adubro@montefiore.org

Department of Behavioral Science, Montefiore Medical Center, Bronx, NY, USA

Citation: Dubro A (2021) Pharmacotherapy of Psychotic Symptoms in Post-traumatic Stress Disorder. Med Clin Rev Vol.7 No.8:151.

Introduction

Post-Traumatic Stress Disorder frequently co-occurs with psychotic symptoms [1]. The clinical description of psychotic symptoms primarily has been consistent with auditory or visual hallucinations of combat experiences (e. g., people screaming, gunfire, explosions) but with infrequent descriptions of delusions. The delusional symptoms do not occur exclusively during flashback episodes and typically are chronic in nature.

Sareen et al. described the high co-occurrence of psychotic symptoms and PTSD in the National Comorbidity Study [2]. The co-occurrence of PTSD with psychotic symptoms was associated with greater levels of severity (higher total number of PTSD symptoms, greater levels of comorbidity, and high distress) compared with that for PTSD alone. The most common psychotic symptoms in the study were: believing that other people were spying on or following them (27.5%); seeing something that others couldn't see (19.8%); having unusual feelings inside or outside of their bodies, such as feeling as though they were being touched when no one was really there (16.8%); believing that they could hear what someone else was thinking (12.4%); being bothered by strange smells that no one else could smell (10.3%); and believing that their behaviors and thoughts were being controlled by some power or force (10%).

The following case vignette illustrates these symptoms:

The client was involved in a physical altercation with another man in 2019. He is facing attempted murder charges. He does not have any previous criminal record. Since the incident the client has been experiencing the paranoid delusion that he is being followed by strangers in public who have knowledge of the altercation, and that he is being monitored and stalked on a constant basis.

Psychotic symptoms represent one of several psychiatric comorbid symptoms or diagnoses associated with chronic posttraumatic stress disorder (PTSD). Research has shown that there is a high incidence of post-traumatic stress disorder (PTSD) in individuals with a primary diagnosis of psychosis and that patients with a diagnosis of PTSD may develop psychotic experiences [3]. In patients with severe mental health problems, traumatic events were grouped into the following categories: sexual assault (unwanted sexual contact or, for children under 13, sexual contact with someone who was at least 5 years older), physical attack (without a weapon), physical attack with a weapon, witnessing trauma (killing or serious injury) of another, car or work accident, man-made or natural disaster, other situation suffered physical damage, other situation feared death of serious injury, having a close friend or relative either killed or murdered by a drunk driver, sudden unexpected loss of loved one, military combat.

Epidemiology

The results of the largest empirical study, Braakman et al. has provided the most comprehensive comparative study regarding the co-morbidity of Post-traumatic stress disorder and psychosis [4]. The overall rate of trauma exposure and PTSD in this sample of individuals with a primary diagnosis of psychosis was high: 94% of participants reported exposure to at least one traumatic event over their lives. Over half (53%) met DSM-IV criteria for current PTSD, despite only one of 17 participants having received such a diagnosis in their clinical record. Severity of trauma was associated with severity of positive experiences and PTSD symptoms. An examination of the relationship between specific traumas and specific symptoms revealed that lifetime physical

assault was only related to delusional psychotic symptoms in general, whereas lifetime sexual assault was only related to hallucinations. An association was found between psychotic experiences (particularly hallucinations) and several variables including PTSD symptoms, dissociation, and post-trauma-related beliefs. After controlling for severity of trauma, depersonalization significantly predicted hallucinations.

Patients with Post-traumatic stress disorder and Psychosis experience significantly more functional impairment than do patients with Post-traumatic stress disorder without psychotic features. Occupational and social severity of Post-traumatic stress disorder and Psychosis has been characterized as comparable to schizophrenia spectrum disorders [5].

Prevalent rates of Post-Traumatic Stress Disorder and Psychosis are estimated at 30%, versus less than 8% in the general population. A study of approximately 5000 war veterans in the United States found that half of the patients diagnosed with Post-Traumatic Stress Disorder also experienced psychotic symptoms [6].

Recent research has continued to find co-morbidity between Post-traumatic Stress Disorder and Psychosis [7].

Biological studies

Several biological studies support the notion that Post-traumatic Stress Disorder and Psychosis may be a distinct subtype of PTSD. An early study found differences in plasma activity of the enzyme dopamine β-hydroxylase (DBH) in these patients compared in those with Post-traumatic Stress Disorder without psychosis and healthy control subjects [8]. DBH converts norepinephrine to dopamine.

Functional alterations in the hypothalamic-pituitary-adrenal axis have long been described in [9]. Sautter et al. assessed cerebrospinal fluid concentrations of corticotrophin-releasing hormone in subjects with Post-traumatic Stress Disorder, subjects with Post-traumatic Stress Disorder and psychosis, and healthy subjects [10]. Subjects with Post-traumatic Stress Disorder and psychosis had significantly elevated corticotrophin-releasing hormone levels compared with subjects with PTSD without psychotic features and healthy control subjects.

Altered platelet serotonin levels have been reported in several psychiatric disorders. Pivac et al. investigated platelet serotonin levels in veterans without Post-Traumatic Stress Disorder, veterans with Post-Traumatic Stress Disorder, and veterans with Post-Traumatic Stress Disorder and Psychosis [11]. Platelet serotonin levels were elevated in subjects with Post-Traumatic Stress Disorder and Psychosis.

Psychosocial factors

Low social support in the aftermath of trauma has been shown to increase the risk for severity of Post-Traumatic Stress Disorder [12]. Most studies of Post-Traumatic Stress Disorder and Psychotic symptoms have consistently reported more severe symptom burden in these patients, so it would follow that viability of social supports played a role. Research investigating correlations between the original traumatic experience as well as new psychosocial stressors and the severity of psychotic symptoms should be undertaken. It is conceivable that the presence of these symptoms may lead to further social isolation and compound treatment and recovery.

Treatment

Risperidone, olanzapine, quetiapine, ziprasidone, and aripiprazole are all linked to data showing benefit in the treatment of Post-traumatic Stress Disorder and psychotic symptoms. - A randomized, double-blind, placebo-controlled study investigated the efficacy of risperidone in treating Post-traumatic Stress Disorder and Psychotic symptoms [13]. Thirty-seven subjects completed at least 1 week of treatment with risperidone or placebo during a 5-week period. Subjects receiving risperidone showed a significantly greater decrease in psychotic symptoms compared with placebo-treated veterans ($P < 0.05$). In an open-label study, Petty et al. administered olanzapine for 8 weeks to 30 subjects diagnosed with post-traumatic stress disorder with psychotic symptoms [14]. All psychotic symptoms improved significantly during treatment. A double-blind, placebo-controlled study was conducted to investigate the potential efficacy of ziprasidone in treating the psychotic symptoms of chronic PTSD in 40 subjects [15]. Thirty-seven subjects completed at least 1 week of treatment with or ziprasidone or placebo during a 5-week follow-up period. Subjects receiving ziprasidone showed a significantly greater decrease in psychotic symptoms compared with placebo-treated veterans ($P < 0.05$).

Olanzapine and quetiapine have been used as adjunctive therapies for patients who did not respond to selective serotonin reuptake inhibitors (SSRIs). In an open-label study, Ahearn et al. added quetiapine to sertraline in 15 patients with PTSD with secondary psychotic symptoms [16]. The addition of quetiapine to SSRI therapy resulted in a 42% overall improvement in PTSD symptoms.

Disclosure

The author reports no commercial or financial relationships regarding this article.

References

1 Kilcommons AM, Morrison AP (2005) Relationships between trauma and psychosis. Acta Psychiatr Scand 112: 351-359.

2 Sareen J, Cox BJ, Goodwin RD, Asmundson GJ (2005) Co-occurrence of posttraumatic stress disorder with positive psychotic symptoms in a nationally representative sample. J Trauma Stress 18: 313-322.

3 Frame L, Morrison AP (2001) Causes of posttraumatic stress disorder in psychotic patients. Arch Gen Psychiatry 58: 305-306.

4 Braakman MH, Kortmann FAM, van den Brink W, Verkes RJ (2008) Posttraumatic stress disorder with secondary psychotic features: neurobiological findings. Progr Brain Res 167: 299-302.

5 Sautter FK, Brailey K, Uddo MM, Hamilton F, Beard MG, et al. (1999) PTSD and comorbid psychotic disorder: comparison with veterans. J Trauma Stress 12: 73-88.

6 Carlson SF, Sheikh J (2000) Psychotic symptoms in posttraumatic stress disorder. CNS Spectr 5: 52-57.

7 Probst C, Morgan C, Bärnighausen C, Kittirattanapaiboon P, Kwansanit P, et al. (2021) Traumatic events and psychotic experiences: a nationally representative study in Thailand. Epidemiol Psychiatr Sci 30: 47.

8 Hamner MB, Gold PB (1998) Plasma dopamine beta-hydroxylase activity in psychotic and non-psychotic post-traumatic stress disorder. Psychiatry Res 77: 175-181.

9 Charney DS, Deutch AY, Drystal JH, Southwick SM, Davis M (1993) Psychobiologic mechanisms of post-traumatic stress disorder. Arch Gen Psychiatry 50: 295-305.

10 Sautter FJ, Bissette G, Wiley J, Manguno-Mire G, Schoenbachler B, et al. (2003) Corticotropin-releasing factor in posttraumatic stress disorder (PTSD) with secondary psychotic symptoms, nonpsychotic PTSD, and healthy control subjects. Biol Psychiatry 54: 1382-1388.

11 Pivac N, Knezevic J, Kozaric-Kovacic D, Dezeljin M, Mustapic M, et al. (2007) Monoamine oxidase (MAO) intron 13 polymorphism and platelet MAO-B activity in combat-related posttraumatic stress disorder. J Affect Disord 103(1-3): 131-138.

12 Kilpatick DG, Koenen KC, Ruggiero KJ, Acierno R, Galea S, et al. (2007) Serotonin transporter genotype and social support and moderation of posttraumetic stress disorder and depression in hurricane-exposed adults. Am J Psychiatry 164(11): 1-7.

13 Hamner MB, Deitsch SE, Brodrick PS, et al. (2003) Quetiapine treatment in patients with posttraumatic stress disorder: an open trial of adjunctive therapy. J Clin Psychopharmacol 23: 15-20.

14 Petty F, Brannan S, Casada J, Davis LL, Gajewski V, et al. (2001) Olanzapine treatment for post-traumatic stress disorder: an open-label study. Int Clin Psychopharmacol 16: 331-337.

15 Siddiqui Z, Marcil, WA, Bhatia SC, Ramaswamy S, Petty F (2005) Ziprasidone therapy for post-traumatic stress disorder. J Psychiatry Neurosci 30(6): 430-431.

16 Ahearn EP, Mussey M, Johnson C, Krohn A, Krahn D (2006) Quetiapine as an adjunctive treatment for post-traumatic stress disorder: An 8-week open-label study. Int Clin Psychopharmacol 21: 29-33.