Psychotic Symptoms and Comorbid Psychiatric Disorders in Croatian Combat-related Posttraumatic Stress Disorder Patients

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Aim. To investigate the prevalence rate of post-traumatic stress disorder (PTSD) comorbid psychiatric disorders and to explore psychotic symptoms in patients with combat-related current PTSD.

Method. The sample included Croatian war veterans (N=41) who were hospitalized at the University Department of Psychiatry of the Vrapce Psychiatric Hospital during the 1995-1996 period and fulfilled the DSM-IV criteria for the current and chronic PTSD. The Schedule for Affective Disorder and Schizophrenia (SADS-L) was applied for the assessment of current and lifetime psychiatric disorders. Only three subjects had a prewar Axis I psychiatric disorder. One third of the patients met the criteria for a personality disorder.

Results. After severe combat trauma, the majority of PTSD patients (33/41) had at least one comorbid psychiatric diagnosis on Axis I. In those with personality disorders the most frequent was alcohol dependence, whereas in those without personality disorders it was major depressive disorder. Psychotic symptoms occurred in 8 out of 41 PTSD patients. None of them had a primary psychotic disorder or a personality disorder. In all patients the psychotic symptoms were different from flashbacks. They were symbolically related to the trauma and resistant to antipsychotic treatment. Psychotic symptoms were associated with depression in 5 out of 8 patients with psychotic symptoms.

Conclusion. Severe and prolonged combat trauma may be followed by the co-occurrence of PTSD and psychotic symptoms, forming an atypical clinical picture of PTSD.

Key words: comorbidity; Croatia; depression, reactive, psychotic; depressive disorder; neuroses, post-traumatic; personality disorders; psychosis; PTSD; stress disorders, post-traumatic; veterans; war

Epidemiological and clinical studies have shown that war-related posttraumatic stress disorder (PTSD) is frequently associated with other psychiatric disorders (1-3). The rate of comorbidity is especially high in combat-related PTSD. The most frequent comorbid disorders are major depressive disorder, generalized anxiety disorder, panic disorder, phobia, drug and alcohol abuse, and personality disorders (4-9).

Many studies report a high frequency of psychotic symptoms in combat veterans [reviewed in 10]. This frequency ranges from 15% to 64%. On the other hand, others suggest that such cases are not numerous (10,11) or that these symptoms are not psychotic but dissociative or re-experiencing symptoms related to the trauma and flashbacks (12). Several recently conducted studies confirm the existence of psychotic symptoms associated with war-related PTSD (13-18). It has been observed that psychotic symptoms are symbolically related to trauma (14,15). They are non-bizarre, typically reflect combat themes and guilt, and appear to be associated with major depression (13). Patients with more severe psychotic symptoms are likely to have more severe PTSD (19). Furthermore, some authors suggest that psychotic symptoms in PTSD are not due to a primary psychotic disorder, but that existence of psychotic symptoms in PTSD may be a distinct PTSD subtype (13-15,19).

Having in view the lack of systematic investigation of psychotic symptoms comorbid with PTSD, our aim was to explore the prevalence of comorbid psychiatric disorders in Croatian war veterans with combat-related PTSD and to explore psychotic symptoms in these patients.
Subjects and Methods

Subjects

All war veterans hospitalized due to combat-related psychologic disturbance at the University Department of Psychiatry of Vrapčić Psychiatric Hospital in Zagreb in a year period (July 1995 – July 1996) comprised the subject pool (N=60). Only patients who met the DSM-IV criteria (20) for current and chronic PTSD were included in the study (N=41), whereas those who did not fulfil the DSM-IV criteria (N=19) were excluded from further analysis.

The final study sample comprised 1 female and 40 male Croatian war veterans, aged from 20 to 59 years (median, 33 years). Most of the subjects had secondary school education (80%) and were married (almost two thirds). The duration of combat trauma ranged from 2 to 3 years; 12-15 months elapsed since they had experienced the war trauma. The majority of them exhibited PTSD symptoms while they were still in active duty and sought treatment due to the severity of the PTSD symptoms. None of them had suffered significant physical injury.

Diagnostic Assessment

A senior psychiatrist experienced in treating war-traumatized persons (S.I.) administrated the Schedule for Affective Disorders and Schizophrenia-Lifetime Version (SADS-L) (21) and performed structured clinical interviews based on DSM-IV criteria (20). The SADS-L is a frequently used instrument for collecting data on symptoms for a wide range of psychiatric disorders, especially schizophrenia and schizoaffective/affective disorders. The SADS-L provides data necessary for the psychiatric assessment of current and lifetime diagnoses, and both current and lifetime diagnoses were made. Since SADS-L does not provide data necessary for the psychiatric assessment of PTSD, current PTSD was diagnosed on the basis of a structured clinical interview according to DSM-IV criteria (20).

During psychiatric and psychotherapeutic treatment, in-depth interviews were performed on several occasions with 8 patients who had psychotic symptoms. In-depth interviews provided data regarding the trauma and the persistence of psychotic symptoms.

Treatment of PTSD Patients with Psychotic Symptoms

Patients with psychotic symptoms were treated pharmacologically by psychiatrists in charge. All patients with psychotic symptoms were unresponsive to antipsychotic drug treatment prescribed according to adequate drug trials of a minimum b-week period. Because of possible treatment resistance, pharmacological treatment in those patients was constantly peer supervised. The antipsychotic treatment included a minimum of two trials with typical antipsychotics (fluphenazine benzoate, up to 15 mg per day), and a Clozapine trial with 4 patients receiving up to 600 mg per day. The administration of Clozapine was discontinued for 4 patients due to the intolerability of the side effects. In a year follow-up period, combined treatment with other antipsychotics, like tirodiazine up to 600 mg per day and perazine up to 600 mg per day, was applied. Carbamezapin up to 600 mg per day, and Lithium up to 900 mg per day were also used. Five patients with depression and psychotic symptoms were also treated according to several antidepressive trials including tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRI). New atypical antipsychotics were not used because they were not available at that time in Croatia.

In all patients with psychotic symptoms, psychotherapy was performed by the first author.

Results

The prevalence of Axis I and Axis II comorbid disorders in PTSD patients is presented in Table 1. Only 8 patients met the criteria for PTSD only, whereas most patients, i.e., 33 out of 41 patients met the criteria for at least one other psychiatric disorder, either on Axis I or on Axis II (median of PTSD comorbid disorders was 1, range, 0-3). Major depressive disorder and alcohol dependence were the most common Axis I disorders. Alcohol dependence was observed in 11 out of 41 patients, and major depressive disorder in 16 patients. Generalized anxiety disorder, social phobia, and panic disorder were much less frequent.

Out of 5 PTSD patients with major depressive disorder, 2 had the disorder before the war. Similarly, one patient with PTSD, generalized anxiety disorder, and alcohol dependence had alcohol dependence also before the war. This means that only a very small number of PTSD patients (3 out of 41) had a previous Axis I psychiatric disorder.

Table 1. War veterans with PTSD (N=41) with different current comorbid diagnoses

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD only</td>
<td>8</td>
</tr>
<tr>
<td>PTSD with one comorbid disorder:</td>
<td></td>
</tr>
<tr>
<td>Major depressive disorder</td>
<td>5</td>
</tr>
<tr>
<td>Major depressive disorder with psychotic features</td>
<td>5</td>
</tr>
<tr>
<td>Delusional disorder</td>
<td>3</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>1</td>
</tr>
<tr>
<td>General anxiety disorder</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
<tr>
<td>PTSD with two comorbid diagnoses:</td>
<td></td>
</tr>
<tr>
<td>Alcohol dependence, personality disorder</td>
<td>8</td>
</tr>
<tr>
<td>Major depression, panic disorder</td>
<td>2</td>
</tr>
<tr>
<td>Major depression, alcohol dependence</td>
<td>1</td>
</tr>
<tr>
<td>Major depression, social phobia</td>
<td>1</td>
</tr>
<tr>
<td>Major depression, personality disorder</td>
<td>1</td>
</tr>
<tr>
<td>Generalized anxiety disorder, alcohol dependence</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
</tr>
<tr>
<td>PTSD with three or more comorbid diagnoses:</td>
<td></td>
</tr>
<tr>
<td>Major depressive disorder, alcohol dependence, personality disorder</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
</tr>
</tbody>
</table>

*Out of 5 patients with PTSD and major depressive disorder, 2 had major depressive disorder before the war.

This patient also had prewar alcohol dependence.
were compared by means of chi-square. Due to the small frequency of some diagnosis, only the data concerning overall comorbidity, alcohol dependence, major depressive disorder, and psychotic symptoms were analyzed. The analysis revealed that the overall comorbidity rate did not increase in association with a personality disorder. In regard to the specific comorbidity, alcohol dependence comorbid with PTSD was more frequently found in those with personality disorder than in those without personality disorders. On the other hand, a major depressive disorder comorbid with PTSD was more frequently found in those without personality disorders. Psychotic symptoms were found only in those without personality disorders. In other words, having personality disorder was associated with having PTSD and comorbid alcohol dependence, whereas in patients without personality disorder PTSD was associated with depression and psychotic symptoms.

Out of 41 PTSD patients, 8 had psychotic symptoms. None of the patients who exhibited psychotic symptoms along with a combat-related current PTSD had any psychiatric disorder before the war. Patients with psychotic symptoms were analyzed in regard to their psychotic features. In 5, the symptoms were accompanied by depression and 3 had delusional symptoms. For 5 patients with psychotic symptoms and depression, in 2 the depression was accompanied by auditory hallucinations and in 1 by both visual and auditory hallucinations, whereas 2 patients had paranoid ideas, such as somebody following them and trying to poison them. The auditory hallucinations were frequently voices accusing them of being guilty for the death of other soldiers (in 2 patients), accompanied by the visual hallucinations of grotesque, ugly faces, or those of dead people telling them that they were not good or that they did not do the right thing (in 1 patient).

All 8 patients (7 men and 1 woman) who had psychotic symptoms comorbid to current PTSD were exposed to prolonged and severe combat-related trauma. During the two years of active participation in war, all of them were frequently exposed to gruesome scenes and human remains, frequently witnessing grotesque deaths. Three patients witnessed deaths of close friends screaming for help, but the patients were unable to help them.

In the one year follow up, psychotic symptoms were continuous and resistant to anti-psychotic treatment in all patients. Delusional disorder was diagnosed in 3 patients, and major depressive disorder with psychotic features in 5 patients. In all patients, psychotic symptoms were directly or symbolically related to trauma. For example, the patient who had been exposed to gruesome scenes of human remains had visual hallucinations of monster-like little people which she described as composed of inflated human intestines. The patient who had survivor’s guilt because he had not been able to help his friend, frequently heard voices accusing him of not being helpful enough and therefore responsible for his friend’s death. These psychotic symptoms were related to the trauma and feeling of guilt, but were not authentic trauma re-experiencing and therefore could not be classified as flashbacks or dissociations.

### Discussion

The aim of our study was to investigate psychotic and other psychiatric comorbidity in Croatian combat-related PTSD patients. Out of 41 PTSD patients, only 3 had a previous Axis I psychiatric disorder. However, one third of the PTSD patients had character pathology embodied as an Axis II personality disorder, with the antisocial type as the most frequent personality disorders. Personality disorders are thought to reflect persistent constellations of traits and behaviors and are distinguished from Axis I symptom disorders (20). The rate of personality disorders in non-clinical samples is much smaller and ranges from 0.4-13.5%, depending on the type of personality disorder and population characteristics (22). In clinical samples, including PTSD, the prevalence of personality disorders increases (23,24). It has been suggested that having a personality disorder might represent potential vulnerability for the development of Axis I disorders, including PTSD (24). Our results also suggest personality disorder as a risk factor for the PTSD development after a severe combat trauma.

The majority of PTSD patients had comorbid Axis I disorder. There was no increase in overall Axis I comorbidity rate associated with personality disorders, suggesting that PTSD patients with or without personality disorders were at equal risk.
for having an additional Axis I comorbid disorder. However, there was a difference in the frequency of specific comorbidity in those with personality disorder and those without it. PTSD comorbid with alcohol dependence was more often found in those with personality disorders, whereas major depressive disorder and psychotic symptoms were more often found in those without personality disorders. Results suggest that PTSD patients with personality disorder are at risk for developing alcohol dependence after war trauma. It has been shown that PTSD in patients with personality disorder is often associated with alcohol abuse (11). Our results suggest that subjects without personality disorder but with PTSD are at risk for developing comorbid depressive disorder and psychotic symptoms.

Our study showed that combat-related PTSD was frequently associated with other psychiatric disorders, which is in line with the results of other studies (4-10). The majority of PTSD patients have at least one more diagnosis (1-3). The most frequent comorbid Axis I disorders in our patients were alcohol dependence and major depressive disorder. Other studies also found these disorders the most frequently associated disorders in war veterans with PTSD (4-9). In comparison to other studies, our study revealed relatively low prevalence rates of generalized anxiety disorder and panic disorder, and no case of drug abuse. Comorbidity rates differ from study to study, suggesting that there are several factors influencing the prevalence of comorbid disorders, such as the type of war stressors (25) or sample specificities (10). However, the nature of PTSD comorbid disorders is not clear enough. Many PTSD symptoms overlap with symptoms present in other psychiatric disorders and it has been suggested that associated psychiatric disorders are not truly comorbid but are interwoven with PTSD (9,10). On the other hand, it has been suggested that comorbid diagnoses might represent distinct disorders (3).

In our study, a relatively high number of patients with current PTSD (8 out of 41) demonstrated psychotic symptoms different from flashbacks and dissociative symptoms. None of the patients with psychotic symptoms had a primary psychotic disorder or a personality disorder. In the sample of 53 male combat veterans, David et al (13) found that 40% of them reported psychotic symptoms, mostly hallucinations, which were associated with a major depressive disorder. In another study of 45 Vietnam combat veterans, 68% PTSD patients with psychotic symptoms had major depressive disorder (19). Our study also revealed that psychotic symptoms were closely related to depression.

It seems that psychotic symptoms in all patients were symbolically related to trauma, reflecting combat themes and guilt. This is consistent with other reports (13,15). Deering et al (10) suggested that the chronicity and severity of PTSD, as well as sample specificities (i.e., treatment-seeking sample), are factors which could lead to such severe regression, when primitive psychotic-like defenses begin to emerge.

The recent study of Hamner et al (19) has suggested the relationship between the PTSD severity and psychotic symptoms. Although we did not evaluate PTSD symptoms psychometrically, all subjects met the criteria for current and chronic PTSD, and were hospitalized due to the severity of PTSD symptoms, implicating that all patients had at least moderate to severe PTSD symptoms. It seems that severe and prolonged combat trauma can be followed by psychotic symptoms, forming an atypical clinical picture of PTSD, like the one described under the term of “malignant post-Vietnam stress syndrome” (26).

Psychotic symptoms are not recognized as possible symptoms of PTSD in the DSM-IV (20). Instead, if the symptom response pattern to the extreme stressor meets criteria for another mental disorder, these diagnoses should be applied. In other words, trauma is regarded as a trigger mechanism for the occurrence of a psychotic disorder, and not as an etiologic factor. However, the relationship between the trauma and psychotic symptoms remains unclear. Our data suggest that psychotic symptoms in PTSD patients are different from flashbacks, have a strong symbolic relation to the trauma, and are an integral part of PTSD. However, a significant interaction is likely to exist between PTSD, depression, and psychotic features.

In general, PTSD is a complex disorder with varying symptoms, which affects survivors of different traumatic events (27,28). There are also atypical clinical pictures (26,29). This leads to the suggestion that distinct subtypes of PTSD with depressive, anxiety, panic or psychotic features might exist (13,14,19). However, more systematic studies are needed to explore the possibility of including a diagnostic subtype of “PTSD with psychotic features” in the formal classification of psychiatric disorders.

The main limitation of this study lies in the small number of subjects and conclusions are only of preliminary type. The second limitation is the lack of diagnostic cross validation. Several additional limitations are noteworthy and must be considered to provide a context for interpreting our findings. Our sample consisted of combat-related PTSD patients requiring psychiatric hospitalization, and one third of patients had character pathology. Thus, our findings may not be generally applied to the outpatient population in which base rates of disorders could differ. A study by Southwick et al (30) pointed to a high rate of personality disorder in both inpatient and outpatient samples of war veterans.

Our study implicates that psychotic symptoms which differ from flashbacks and have a strong symbolic relation to the trauma, might be best classified as clinical symptoms of PTSD. Further systematic studies on larger samples of war traumatized subjects are required to show whether psychotic symptoms are a part of the primary psy-
Posttraumatic stress disorder and concurrent psychotic disorder. A new subtype of PTSD.

References


