

Criteria and diagnostic scale of the post-combat delayed response (tension) syndrome

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Abstract

Objective. War participation risks mental disorders. Ukrainian combatants in Anti-Terrorist Operation/Joint Forces Operation since 2014 receive psychiatric care. Some show unique symptoms, not fitting recognized disorders, termed post-combat delayed response (tension) syndrome. The aim of this study was to establish diagnostic criteria and develop a scale of differential diagnosis of post-combat delayed response (tension) syndrome.

Methods. This was a clinical retrospective study conducted on the basis of Zaporizhzhia Military Hospital and Zaporizhzhia and State Medical University, Ukraine, in the period from 2015 to 2021. Combatants of Ukraine—members of Anti-Terrorist Operation/Joint Forces Operation were involved in the study. In total, 426 male combatants were surveyed from whom those suffering from post-traumatic stress disorder ($n = 24$), neurasthenia ($n = 35$), and post-combat delayed response (tension) syndrome ($n = 46$) were selected.

Results. The key symptoms of post-combat delayed response (tension) syndrome were selected and ranked in order of their differential diagnostic value. The diagnostic scale for post-combat delayed response (tension) syndrome was developed, which consists of 12 points.

Conclusions. The received anamnestic information is important for classifying patients at risk of post-combat delayed response (tension) syndrome.

Introduction

Today's world includes a continuous chain of local zones of instability and hot spots that require the involvement of military contingents.¹⁻³ Currently, armed conflicts are raging in Syria, Afghanistan, Iraq, the Gaza Strip, Libya, Yemen, and so forth.⁴ Fighting associated with the armed aggression of the Russian Federation has been going on in Ukraine since 2014, involving a significant contingent of servicemen.⁵ Ukrainian combatants defend the territory of their country in the war with the Russian Federation, being under the influence of a number of traumatic factors. To date, more than 460,000 citizens in Ukraine have received the status of a participant in hostilities, of which, from 2014 to February 1, 2021, 405,711 people received this status, including 19,402 women who were involved in repelling and deterring armed aggression by the Russian Federation in Donetsk and Luhansk oblasts—Anti-Terrorist Operation (ATO)/Joint Forces Operation (JFO).⁶ Participation in hostilities is associated with the influence of various factors of the combat situation on the human psyche up to the possibility of developing mental disorders of varying severity.^{7,8} Classically, such disorders belong to the group of disorders of combat trauma or combat mental trauma. Often such disorders are related to the nomenclature of mental disorders that occur among the civilian population.⁹ For example, combat stress reaction in its clinical manifestations and coding coincides with acute stress reaction—F43.0. With the development of military psychiatry and the increase in the number of observations, specific mental disorders associated with hostilities were identified, which before their description in the military contingent were not described among the civilian population.¹⁰⁻¹²

The most famous example is post-traumatic stress disorder (PTSD) (F43.1), which is described in the contingent of American Vietnam War veterans and was officially recognized in 1980 by the DSM-III. Often such disorders are delayed or protracted in their onset and dynamics.¹³⁻¹⁵ This means that they are able to affect not only the quality of life and combat effectiveness of active servicemen but also the extrawar life of veterans who have already completed service in the army. Long-term consequences can be social and family maladaptation of combatants, their propensity to use psychoactive substances, and even suicidal behavior.¹⁶⁻¹⁸ At the same time, timely diagnosis and treatment of such conditions is an urgent task. Since 2014, providing psychiatric care to Ukrainian combatants involved in the ATO/JFO, author has drawn attention to the presence in the clinical picture of some combatants of a stable complex of psychopathological symptoms, which in its continuity and features of the onset does not correspond to described and qualified disorders.¹⁹⁻²¹ Author has suggested previously that the evidence suggests a new and distinct mental disorder from the group of combat mental trauma, which author called

post-combat delayed response (tension) syndrome or post-combat delayed response (tension) disorder.^{22,23} Our subsequent observations confirmed this hypothesis. The aim of this study was to establish diagnostic criteria and develop scales of differential diagnosis of post-combat delayed response (tension) syndrome.

Materials and methods

Study design and participants. This was a clinical retrospective study conducted on the basis of Zaporizhzhia Military Hospital and Zaporizhzhia and State Medical University, Ukraine, in the period from 2015 to 2021. Combatants of Ukraine—members of ATO/JFO were involved in the study. All patients gave informed consent to participate in the study. The study was approved by the Commission on Bioethics of Zaporizhzhia State Medical University (review document, № 5/June 14, 2018). In total, the author surveyed 426 male combatants, from whom the author selected those suffering from PTSD, neurasthenia and post-combat delayed response (tension) syndrome. Then grouped the study participants into 3 groups according to the type of mental disorder they suffered from the main group (MG) included 46 combatants with post-combat delayed response (tension) syndrome, and the first comparison group (CG-1) included 24 combatants with PTSD and the second comparison group (CG-2) included 35 combatants with neurasthenia. Diagnoses of neurasthenia (F48.0) and PTSD (F43.1) were made according to ICD-10 criteria.

Some socio-demographic characteristics, personality traits, and psychological state of combatants before deployment to the combat zone could influence the risk of further development of a delayed stress response. In particular, potential risk factors include:

- age—younger fighters may have been more vulnerable;
- marital status—those who were single or did not have children may have had less social support;
- education—lower educational level may have been associated with lower stress tolerance;
- personality traits—high anxiety, neuroticism, etc.;
- previous mental trauma or episodes of depression or anxiety
- social isolation or lack of support;
- problems with alcohol or other substance abuse

To select cases for the study, participants were selected on the basis of diagnostic exclusivity, ie they had only 1 diagnosis: either PTSD, neurasthenia, or delayed stress response. Combatants with multiple or undetermined diagnoses were not included. Diagnoses were made by independent professionals who were unaware of the study's hypotheses and purpose. These diagnosticians worked separately from the research team and did not know which group a particular patient would be assigned to. This approach minimized bias and errors in diagnosis, and thus clearly identified the symptoms of delayed stress response that distinguished it from PTSD or neurasthenia. Thanks to this, the author was able to prove the uniqueness and diagnostic value of the symptoms of post-combat delayed stress response described by them. This approach ensured the validity of the results and the validity of the conclusions regarding the allocation of this separate disorder among other mental disorders in combat veterans.

Data analysis. The author performed data analysis using TIBCO STATISTICA[®] 13.0 (TIBCO Software Inc. №JPZ804138213 0ARCN10-J) and MICROSOFT EXEL 2013 (license code 00331–10000-00001-AA404). Statistical analysis was performed using descriptive and mathematical statistics. The author used the method

of sequential analysis of A. Wald, based on the theorem of T. Bayes, in the adaptation of A.A. Genkin and E.V. Gubler, authors used to calculate mutual information (MI) and Jeffreys divergence (J-divergence, J) for Kullback's method. The author also used Pearson's criterion (χ^2) with the universal value of statistical probability (p). The method of sequential analysis of A. Wald, based on the theorem of T. Bayes, in the adaptation of A.A. Genkin and E.V. Gubler, the author used to calculate mutual information (MI) and Jeffreys divergence (J-divergence, J) for Kullback's method. Author also used Pearson's criterion (χ^2) with the universal value of statistical probability (p). The author found that post-combat delayed response (tension) syndrome consists of the following symptoms: causeless emotional tension, a feeling of unreasonable anger or rage, internal motivation for aggressive behavior, inability to relax, irritability, minor degrees of causeless anxiety, a feeling of muscular tension, emotional disorders (mood swings or anhedonia or minor degrees of depression), sleep disturbed in any phases, tense dreams about life in combat conditions, tension headaches, an enhanced startle reaction, hypervigilance, a state of autonomic hyperarousal, stay in the combat zone for 3 months or more, a latency period of the disorder from a few days to 1 month after leaving the combat zone.

Results and discussion

Based on the conducted psychopathological research in the MG, the author identified all the psychopathological symptoms in the studied contingent. From the resulting conglomeration of symptoms, the author peeled off those that were due to comorbid pathology. Author analyzed the rest of the symptoms by their quantitative and qualitative content, peculiarities of origin and dynamics.

First identified psychopathological symptoms that were present in most MG combatants. The author attributed these symptoms to the main (obligatory) symptoms of post-combat delayed response (tension) syndrome (Table 1). Then the author identified psychopathological symptoms that were found in the clinical picture of combatants with MG diffusely. The author attributed them to the optional symptoms of post-combat delayed response (tension) syndrome. The author compared the symptoms of post-combat delayed response (tension) syndrome with symptoms similar to those of disorders such as neurasthenia and PTSD. Author found that the complex of symptoms of post-combat delayed response (tension) syndrome is stable, specific, and generally different from the complex of symptoms of neurasthenia and PTSD, despite the fact that some psychopathological symptoms of these disorders coincide.

The most common reason for MG combatants to seek psychiatric help was the appearance of uncharacteristic internal motivations for aggressive behavior, irritability, and feelings of unmotivated rage, which prevented the resumption of harmonious family relationships after returning from the ATO / JFO area.^{24,25} But most cases were diagnosed during a preventive examination. Sleep disturbances, anhedonia, and mood swings that did not reach the level of severe depression were common.²⁶ Patients reported that after returning from the combat zone, they realized that close people and surrounding events and situations do not evoke the positive emotions and feelings that combatants expected, moreover, everything around provokes irritation, anger, and hatred, objective reasons for which do not exist. The combatants noted that after leaving the ATO/JFO zone, they were in a state of

Table 1. Complex of Psychopathological Symptoms Depending on the Mental Disorder

Post-combat delayed response (tension) syndrome, obligatory symptoms (according to SG)	PTSD (according to ICD-10 criteria)	Neurasthenia (according to ICD-10 criteria)
<ul style="list-style-type: none"> • Causeless emotional tension • A feeling of unreasonable anger or rage • Internal motivation for aggressive behavior • Inability to relax • Irritability • Minor degrees of causeless anxiety • A feeling of muscular tension • Emotional disorders (mood swings or anhedonia or minor degrees of depression) • Sleep disturbed in any phases • Tense dreams about life in combat conditions • Tension headaches • An enhanced startle reaction • Hypervigilance • A state of autonomic hyperarousal • Stay in the combat zone for 3 months or more • A latency period of the disorder from a few days to 1 mo after leaving the combat zone 	<ul style="list-style-type: none"> • “flashbacks” • Episodes of repeated reliving of the trauma in intrusive memories, dreams or nightmares • A sense of “numbness” and emotional blunting • Detachment from other people • Unresponsiveness to surroundings • Avoidance of activities and situations reminiscent of the trauma • An enhanced startle reaction • A state of autonomic hyperarousal • Insomnia • Hypervigilance • Suicidal ideation • Anxiety • Depression • Anhedonia • A latency period of the disorder from a few weeks to months after a traumatic event 	<ul style="list-style-type: none"> • Mental fatiguability • Feelings of bodily or physical weakness and exhaustion after only minimal effort • Difficulty in concentrating • Inefficient thinking • Feelings of bodily or physical weakness and exhaustion after only minimal effort • Inability to relax • Irritability • A feeling of muscular aches and pains • Dizziness • Tension headaches • Feelings of general instability • Worry about decreasing mental and bodily well-being • Minor degrees of depression • Anxiety • Anhedonia • Sleep disturbed in its initial and middle phases • Hypersomnia • The duration of symptoms is 3 mo or more

constant unreasonable emotional stress with an inability to relax.²⁷ They also had intense dreams that were not frightening and did not repeat traumatic situations, but the content reflected the presence in the combat zone—real situations, or, more often than not, those that did not happen in reality. It was reported that the above-mentioned symptoms were not noticed by the combatants during their stay in a combat situation.

The anamnestic and psychoanalytic research helped us to establish the reasons for the development of post-combat delayed response (tension) syndrome. These reasons include a combination of the following factors:

- Military service directly on the territory of hostilities for a long time (3 months or more);
- The presence of daily recurrent acute traumatic factors associated with military service in a combat environment, which is dominated by quantitative or qualitative characteristics of traumatic factors in civilian conditions;
- The need to be constantly in a state of active readiness and waiting;
- Prolonged (3 months or more) stay in conditions that provoke physical exhaustion (uncomfortable weather and living conditions, sleep deprivation, physical overload, etc.);
- Inability to avoid or influence stressors;
- The need to suppress their own emotional reactions and emotional response to stressors while in combat.

Also, the main causes of post-combat delayed response (tension) syndrome were chronic psycho-emotional and physical overload associated with military service in combat, accumulation, summation and chronicity of nervous tension without the ability to get rid of it, for example, by timely response or relaxation.²⁸ It is noteworthy that in all cases of mental disorders, MG debuted after the combatants left the combat zone and their symptoms were not related to stressful events or situations in the non-combat environment.²⁹⁻³¹ All examined combatants with post-combat delayed response (tension) syndrome denied the presence of psychopathological manifestations or subjective feelings of psychological distress while in the combat zone. They also denied the existence of

provoking factors after leaving the war zone. At the same time, more than a third of the respondents admitted that their condition may have deteriorated earlier, but due to lack of time for introspection in combat, they paid attention to the symptoms in a non-stressful environment.³²⁻³⁴ Thus, in post-combat delayed response (tension) syndrome during the action of psycho-traumatic factors there is an effect of blocking or displacing negative emotions with activation of compensatory mechanisms and the development of decompensation after leaving the trouble zone, and is characterized by symptoms of nervous system excitement and accumulated destructive emotions and tensions that were not responded to in a timely manner. There is an effect of delayed response.³⁵

However, this condition in combatants requires a differential diagnosis between related provoking factors and symptoms of mental disorders such as neurasthenia and PTSD. The results of this analysis are shown in Table 2.

Those symptoms that had a positive J , the author attributed to the diagnostic symptoms of post-combat delayed response (tension) syndrome. Among them, the author identified those symptoms of post-combat delayed response (tension) syndrome, for which the reliability of their difference from the symptoms of both other conditions—neurasthenia and PTSD—was 0.05 or less. To develop a diagnostic scale for post-combat delayed response (tension) syndrome between the 2 J values (between the neurasthenia and PTSD comparison groups), the author preferred the values for each of the selected symptoms that had lower values³⁶. The author did this to avoid overdiagnosis (Table 3).

Next, the author ranked the symptoms in descending order of MI (Fig. 1). The most informative for differential diagnosis, the author considered those symptoms of post-combat delayed response (tension) syndrome, which had the highest values of MI.

Wald's method of sequential analysis assumes that each diagnostic criterion is assigned its own value J , based on the summation of which a diagnostic conclusion is made. The reliability of the conclusion (in this case—the conclusion about the presence of post-combat delayed response (tension) syndrome depends on the threshold value of the sum J ($\sum J$): at $\sum J \geq 13$ —the probability of the conclusion is $p < 0.05$, at $\sum J \geq 20$ —the probability of the

Table 2. Analysis of Diagnostic Criteria of Post-Combat Delayed Response (Tension) Syndrome Between Related Groups

Criteria	Groups			$p(\chi^2)$		J		MI	
	MG, <i>n</i> = 46	CG-1, <i>n</i> = 24	CG-2, <i>n</i> = 35	MG vs CG-1	MG vs CG-2	MG vs CG-1	MG vs CG-2	MG vs CG-1	MG vs CG-2
Causeless emotional tension	46 (100%)	10 (41.67)	20 (57.14%)	<0.001	<0.001	3.80	2.43	1.11	0.52
Minor degrees of causeless anxiety	38 (82.61%)	14 (58.33)	20 (57.14%)	0.027	0.012	1.51	1.60	0.18	0.20
Irritability	46 (100%)	10 (41.67)	25 (71.43%)	<0.001	<0.001	3.80	1.46	1.11	0.21
Internal motivation for aggressive behavior	31 (67.39%)	5 (20.83)	–	<0.001	<0.001	5.10	13.73	1.19	4.43
Feeling of unreasonable anger	37 (80.43%)	5 (20.83)	–	<0.001	<0.001	5.87	14.50	1.75	5.62
Mood swings	30 (65.22%)	9 (37.50)	12 (34.29%)	0.027	0.006	2.40	2.79	0.33	0.43
Anhedonia	18 (39.13%)	16 (66.67)	20 (57.14%)	0.029	0.108	–2.31	–1.64	0.32	0.15
Minor degrees of depression	22 (47.83%)	24 (100.00)	33 (94.29%)	<0.001	<0.001	–3.20	–2.95	0.84	0.68
A sense of “numbness” and emotional blunting	1 (2.17%)	20 (83.33)	1 (2.86%)	<0.001	0.844	–15.84	–1.19	6.43	0.00
Difficulty falling asleep	40 (86.96%)	24 (100.00)	30 (85.71%)	0.064	0.872	–0.61	0.06	0.04	0.00
Night awakenings	35 (76.09%)	24 (100%)	27 (77.14%)	0.009	0.912	–1.19	–0.06	0.14	0.00
Daily insomnia	39 (84.78%)	14 (56.33%)	1 (2.86%)	0.014	<0.001	1.62	14.72	0.21	6.03
Hypersomnia	–	–	3 (8.57%)	–	0.043	–	–5.96	–	0.19
Early awakening	25 (54.35%)	16 (66.67%)	5 (14.29%)	0.321	<0.001	–0.89	5.80	0.05	1.16
Tense dreams about life in combat conditions	39 (84.78%)	12 (50.00%)	10 (28.57%)	0.002	<0.001	2.29	4.61	0.40	1.25
Dreams or nightmares repeated reliving of the trauma	–	24 (100%)	–	<0.001	0.380	–16.63	–	8.13	–
Mental fatiguability	–	–	3 (8.57%)	0.467	0.188	–	–5.96	–	0.19
Feelings of bodily or physical weakness and exhaustion after only minimal effort	–	–	34 (97.14%)	0.467	<0.001	–	–16.50	–	7.84
Difficulty in concentrating	5 (10.87%)	2 (8.33%)	21 (60.00%)	0.737	<0.001	1.15	–7.42	0.01	1.82
Inefficient thinking	–	–	3 (8.57%)	0.467	0.188	–	–5.96	–	0.19
A feeling of muscular tension	42 (91.30%)	17 (70.83%)	15 (42.86%)	0.025	<0.001	1.10	3.28	0.11	0.80
A feeling of muscular aches and pains	10 (21.74%)	4 (16.67%)	20 (57.14%)	0.615	0.001	1.15	–4.20	0.03	0.74
Inability to relax	46 (100%)	18 (75.00%)	18 (51.43%)	<0.001	<0.001	1.25	2.89	0.16	0.70
Dizziness	1 (2.17%)	2 (8.33%)	15 (42.86%)	0.227	<0.001	–5.84	–12.95	0.18	2.63
Tension headaches	36 (78.26%)	14 (58.33%)	28 (80.00%)	0.080	0.849	1.28	–0.10	0.13	0.00
Feelings of general instability	5 (10.87%)	3 (12.50%)	29 (82.86%)	0.839	<0.001	–0.61	–8.82	0.00	3.18
Worry about decreasing mental and bodily well-being	20 (43.48%)	23 (95.83%)	32 (91.43%)	<0.001	<0.001	–3.43	–3.23	0.90	0.77
Flashbacks	–	24 (100%)	–	<0.001	–	–16.63	–	8.13	–
Detachment from other people	15 (32.61%)	22 (91.67%)	5 (14.29%)	<0.001	0.058	–4.49	3.58	1.33	0.33
Unresponsiveness to surroundings	8 (17.39%)	18 (75.00%)	2 (5.71%)	<0.001	0.114	–6.35	4.83	1.83	0.28
Avoidance of activities and situations reminiscent of the trauma	–	24 (100%)	–	<0.001	–	–16.63	–	8.13	–

Table 2. Continued

Criteria	Groups			$p(\chi^2)$		J		MI	
	MG, n = 46	CG-1, n = 24	CG-2, n = 35	MG vs CG-1	MG vs CG-2	MG vs CG-1	MG vs CG-2	MG vs CG-1	MG vs CG-2
An enhanced startle reaction	44 (95.65%)	24 (100%)	29 (82.86%)	0.300	0.056	-0.19	0.62	0.00	0.04
A state of autonomic hyperarousal	42 (91.30%)	24 (100%)	33 (94.29%)	0.137	0.612	-0.40	-0.14	0.02	0.00
Hypervigilance	42 (91.30%)	24 (100%)	27 (77.14%)	0.137	0.076	-0.40	0.73	0.02	0.05
Suicidal ideation	-	2 (8.33%)	-	0.227	0.380	-5.84	-	0.18	-
The presence of a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature	28 (60.87%)	24 (100%)	20 (57.14%)	<0.001	0.735	-2.16	0.27	0.42	0.01
The presence of multiple stressful events or situations (of either brief or long duration, which are life-threatening) not catastrophic in nature	46 (100%)	24 (100%)	35 (100%)	-	-	-	-	-	-
A latency period from a few weeks to months after a traumatic event	12 (26.09%)	24 (100%)	-	<0.001	0.005	-5.84	9.60	2.16	1.12
A latency period from a few days to 1 mo after leaving the combat zone	46 (100%)	4 (16.67%)	-	<0.001	<0.001	7.78	15.44	3.24	7.50
Development of the first symptoms during the stay in the combat zone	-	8 (33.33%)	20 (57.14%)	<0.001	<0.001	-11.86	-14.20	1.85	3.90
Stay in the combat zone for 3 mo or more	46 (100%)	20 (83.33%)	28 (80.00%)	0.004	0.002	0.79	0.97	0.07	0.10
The duration of symptoms is 3 mo or more	3 (6.52%)	22 (91.67%)	35 (100%)	<0.001	<0.001	-11.48	-11.86	4.89	5.54

Note: When calculating the indicators, the absence of symptoms in one of the groups was replaced by 1, according to the method of E.V. Gubler.

conclusion is $p < 0.01$, and at $\sum J = \geq 30$ —the probability of the conclusion is $p < 0.001$, that is, if the patient in the clinical picture has all the symptoms of J is 33.55 points and the diagnosis of “post-combat delayed response (tension) syndrome” is reliable, its probability is 99.9%. Thus, author found that the most important from a diagnostic point of view, according to MI, are indications of: a feeling unreasonable anger ($p(\chi^2) = <0.001, J = 5.87, MI = 1.75$), internal motivation for aggressive behavior ($p(\chi^2) = <0.001, J = 5.1, MI = 1.19$), causeless emotional tension ($p(\chi^2) = <0.001, J = 2.43, MI = 0.52$), tense dreams about life in combat conditions ($p(\chi^2) = 0.002, J = 2.29, MI = 0.40$), mood swings ($p(\chi^2) = 0.027, J = 2.40, MI = 0.33$), insomnia ($p(\chi^2) = 0.014, J = 1.62, MI = 0.21$), irritability ($p(\chi^2) = <0.001, J = 1.46, MI = 0.21$), minor degrees of causeless anxiety ($p(\chi^2) = 0.027, J = 1.51, MI = 0.18$), inability to relax ($p(\chi^2) = <0.001, J = 1.25, MI = 0.16$), a feeling of muscular tension ($p(\chi^2) = 0.025, J = 1.10, MI = 0.11$), stay in the combat zone for 3 months or more, and a latency period from a few days to 1 month after leaving the combat zone ($p(\chi^2) = <0.001, J = 7.78, MI = 3.24$). The sum of J of these symptoms reaches the required

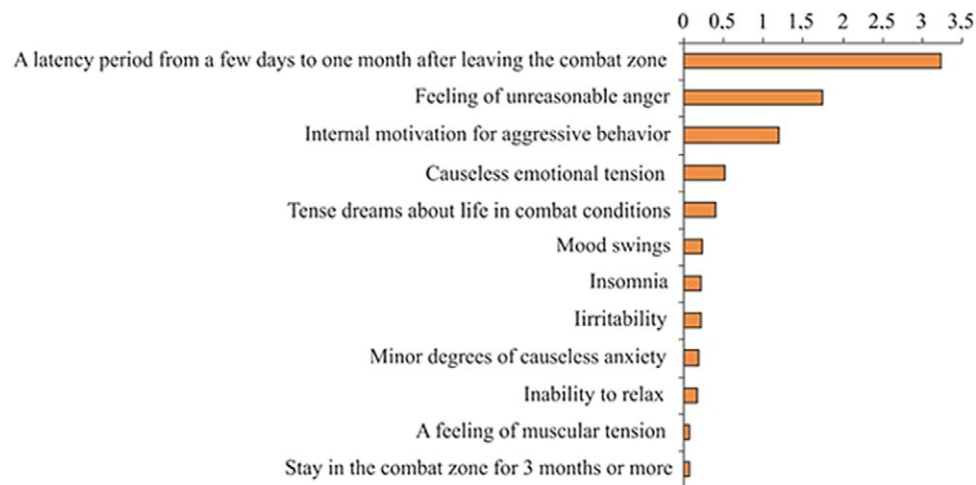
amount to achieve $p < 0.001$ in the diagnosis. They can be considered as typical features. The presence of these symptoms is sufficient to diagnose “post-combat delayed response (tension) syndrome”. Based on the results of the study, the author has developed and proposed for clinical use the following form of the Diagnostic Scale of post-combat delayed response (tension) syndrome (Fig. 2).

Most research focuses on identifying variations in PTSD in different wars. For example, described Chechen Syndrome in Russian veterans.³⁷ Much attention is also paid to the features of PTSD in veterans of Iraq, Afghanistan.^{38,39} But military-related mental disorders in the military are not limited to PTSD, there are other conditions. For example, Gulf War Illness is described separately.⁴⁰⁻⁴¹ Here author describes post-combat delayed response (tension) syndrome as one of the disorders from the group of combat mental trauma. And author proves its difference from other mental disorders that are characteristic of combatants.

The analysis of response data and the differentiation of post-combat delayed response (tension) syndrome from related mental

Table 3. Diagnostic Informativeness Criteria of Post-Combat Delayed Response (Tension) Syndrome

Criteria MG vs CG-1			Criteria MG vs CG-2			Generalized version of criteria		
Diagnostic informativeness symptoms	J	MI	Diagnostic informativeness symptoms	J	MI	Diagnostic informativeness symptoms	J	MI
A latency period from a few days to 1 mo after leaving the combat zone	7.78	3.24	A latency period from a few days to 1 mo after leaving the combat zone	15.44	7.5	A latency period from a few days to 1 mo after leaving the combat zone	7.78	3.24
Feeling of unreasonable anger	5.87	1.75	Daily insomnia	14.72	6.03	Feeling of unreasonable anger	5.87	1.75
Internal motivation for aggressive behavior	5.1	1.19	Feeling of unreasonable anger	14.5	5.62	Internal motivation for aggressive behavior	5.1	1.19
Causeless emotional tension	3.8	1.11	Internal motivation for aggressive behavior	13.73	4.43	Causeless emotional tension	2.43	0.52
Irritability	3.8	1.11	Tense dreams about life in combat conditions	4.61	1.25	Tense dreams about life in combat conditions	2.29	0.40
Mood swings	2.40	0.33	A feeling of muscular tension	3.28	0.8	Mood swings	2.40	0.33
Tense dreams about life in combat conditions	2.29	0.40	Inability to relax	2.89	0.7	Daily insomnia	1.62	0.21
Daily insomnia	1.62	0.21	Causeless emotional tension	2.43	0.52	Irritability	1.46	0.21
Minor degrees of causeless anxiety	1.51	0.18	Mood swings	2.79	0.43	Minor degrees of causeless anxiety	1.51	0.18
Inability to relax	1.25	0.16	Irritability	1.46	0.21	Inability to relax	1.25	0.16
A feeling of muscular tension	1.10	0.11	Minor degrees of causeless anxiety	1.6	0.2	A feeling of muscular tension	1.10	0.11
Stay in the combat zone for 3 mo or more	0.79	0.07	Stay in the combat zone for 3 mo or more	0.97	0.1	Stay in the combat zone for 3 mo or more	0.79	0.07

**Figure 1.** Ranking of symptoms of post-combat delayed response (tension) syndrome in order of strength of their diagnostic value (MI).

disorders such as neurasthenia and PTSD are critical steps in providing effective treatment strategies. While treatment plans should be tailored to individual cases, here are some general treatment approaches based on the analysis of the presented data.

Cognitive-Behavioral Therapy (CBT) can be a valuable therapeutic approach for combatants with post-combat delayed response (tension) syndrome. It can help individuals identify and change maladaptive thought patterns and behaviors, especially those related to anger, irritability, and emotional tension. For combatants experiencing recurring dreams or nightmares about combat situations, exposure therapy techniques can be beneficial. Gradual exposure to traumatic memories in a controlled therapeutic setting can reduce the emotional charge associated with these memories.⁴² Since unreasonable anger and aggressive behavior are

common symptoms, anger management techniques and therapy can help combatants learn healthier ways to cope with and express their anger. In cases where mood disturbances, anxiety, or depression are significant, medication like antidepressants may be prescribed. These can help alleviate symptoms and improve emotional well-being.⁴³ For combatants experiencing sleep disturbances, medications to address insomnia or nightmares may be considered, but their use should be monitored closely.

Group therapy sessions with other combatants who share similar experiences can provide a sense of camaraderie and support. Combatants can share their stories and coping strategies, reducing feelings of isolation. Involving family members in therapy can be crucial for combatants experiencing difficulties in their relationships after returning from combat. Family therapy can help

"Diagnostic scale of post-combat delayed response (tension) syndrome"			
Patient name: _____			
No.	A symptom	J	A sign of the presence of a symptom
1	A latency period from a few days to one month after leaving the combat zone	7.78	
2	Feeling of unreasonable anger	5.87	
3	Internal motivation for aggressive behavior	5.1	
4	Causeless emotional tension	2.43	
5	Tense dreams about life in combat conditions	2.29	
6	Mood swings	2.40	
7	Insomnia	1.62	
8	Irritability	1.46	
9	Minor degrees of causeless anxiety	1.51	
10	Inability to relax	1.25	
11	A feeling of muscular tension	1.10	
12	Stay in the combat zone for 3 months or more	0.79	
		Total ($\sum J$): _____	
Reference values:			
$\sum J \geq 13$ – diagnosis of post-combat delayed response (tension) syndrome possible, the probability of diagnosis is 95%, $p < 0.05$;			
$\sum J \geq 20$ – diagnosis of post-combat delayed response (tension) syndrome probable, the probability of diagnosis is 99%, $p < 0.01$;			
$\sum J \geq 30$ – diagnosis of post-combat delayed response (tension) syndrome reliable, the probability of diagnosis is 99.9%, $p < 0.001$.			

Figure 2. Form of "Diagnostic scale of post-combat delayed response (tension) syndrome".

improve communication and understanding among family members. Teaching combatants stress management techniques such as relaxation exercises, mindfulness, and deep breathing can help them cope with emotional tension and anxiety. Equipping combatants with adaptive coping skills to manage anger, frustration, and emotional reactivity can be essential in their recovery.

Educating combatants about post-combat delayed response (tension) syndrome, its symptoms, and the treatment options available can help reduce stigma and improve treatment adherence. Providing support for combatants as they transition from the combat zone to civilian life can be crucial. This may include assistance with job placement, educational opportunities, and social reintegration. Regular follow-up with mental health professionals can help monitor progress and make necessary adjustments to treatment plans.^{44,45} It's important to note that a comprehensive and individualized treatment plan should be developed for each combatant, taking into account their specific symptoms, needs, and preferences. Additionally, family and social support play a vital role in the recovery process. Close collaboration between mental health professionals, support networks, and the affected combatants themselves is essential to achieving the best treatment outcomes. Furthermore, ongoing research in this field can help refine treatment strategies and improve our understanding of post-combat delayed response (tension) syndrome, ultimately leading to more effective interventions and support for combatants facing this condition.

The research highlights that post-combat delayed response (tension) syndrome is different from related mental disorders such as neurasthenia and post-traumatic stress disorder (PTSD). It presents its unique set of symptoms and characteristics, making it essential to establish a clear diagnostic framework. To aid in the diagnosis of this syndrome, the study proposes a diagnostic scale that incorporates specific symptoms and their associated values. This scale can assist clinicians in identifying and differentiating post-combat delayed response (tension) syndrome from other mental health conditions.

The information described above provides an understanding of post-combatant delayed reaction syndrome (stress) as a separate mental disorder faced by combatants. It emphasizes the importance of recognizing and diagnosing this syndrome in order to provide appropriate care and support to military personnel returning from combat to civilian life.

Conclusions

We described the clinical picture and diagnostic complex of symptoms of a new mental disorder—post-combat delayed response (tension) syndrome. The author has outlined the main psychopathological symptoms of post-combat delayed response (tension) syndrome, which can act as criteria for differential diagnosis. War-related factors can lead combatants to develop distinct mental disorders specific to their combat experiences, setting them apart from civilian mental disorders. However, distinguishing between different combat-related disorders, such as post-traumatic stress disorder (PTSD), post-combat delayed response (tension) syndrome, and neurasthenia, remains a challenging task. Calculation results suggest that the most significant differences between PTSD and post-combat delayed response (tension) syndrome (with $J \geq 13$) include symptoms like a sense of "numbness" and emotional blunting, recurring traumatic dreams or nightmares, flashbacks, and avoidance of trauma-related situations. In contrast, differences between post-combat delayed response (tension) syndrome and neurasthenia involve symptoms like feelings of bodily weakness and exhaustion after minimal effort and the onset of symptoms during the combat zone stay. However, it's important to note that these symptoms may also serve as "exclusion symptoms" for diagnosing post-combat delayed response (tension) syndrome. Clinical practice often reveals cases where combatants experience a combination of different mental disorders. Additionally, the presence of PTSD or neurasthenia in combatants does not rule out the possibility of co-occurring post-combat delayed response (tension) syndrome.

In essence, the complexity of diagnosing combat-related mental disorders highlights the need for a comprehensive approach, considering various symptoms and their combinations to ensure accurate identification and appropriate treatment for combatants facing these conditions. Symptoms such as hypervigilance, a state of autonomic hyperarousal, and an enhanced startle reaction were common to most subjects in all groups and could not act as diagnostic markers among the contingent of combatants examined while in or out of combat. The author explains this by the fact that these symptoms belong to the group of acquired reflexes, due to the peculiarities of combat conditions and inherent in all soldiers involved in the ATO/JFO.

The study has shed light on the emergence of a new mental disorder, post-combat delayed response (tension) syndrome, and has developed a diagnostic scale to help identify and diagnose this condition among combatants. However, several promising directions for further research in this area can be explored. Conducting longitudinal studies to track the progression and long-term outcomes of post-combat delayed response (tension) syndrome in combatants. This would help researchers understand how the disorder evolves over time and whether it can lead to chronic mental health issues. Investigating potential neurobiological markers or physiological changes associated with post-combat delayed response (tension) syndrome. This could involve brain imaging studies or biomarker research to identify specific patterns in brain function or chemistry.

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