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# PSYCHOTHERAPEUTIC STRATEGIES FOR MANAGEMENT OF NEUROTIC DISORDERS IN VETERANS OF MODERN COMBAT

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### Abstract

As a result of using a multi-modality neurological/mental assessment and a multifaceted rehabilitation program (including group therapy), 108 patients with sequelae of mine blast closed traumatic brain injury (MB CTBI) and post-traumatic stress disorder (PTSD) have demonstrated positive trends concerning their neurological and psychological status. From the standpoint of the pathogenetic concept of neurotic disorders, there are four principal categories of neurotic disorders, namely asthenic, anxiety-depressive, hysteria-like and phobic. A conclusion was made that using the methods of group psychotherapy as a constituent of rehabilitation program was effective.

### Key words

mine blast closed traumatic brain injury, post-traumatic stress disorder, rehabilitation, group psychotherapy.

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## 1. Introduction

An important feature of combat in modern warfare is the use of modern weapon systems, including mines, grenades and rocket munitions. In our time the deadly force and the contusion/commotion component of contemporary mine blast injury have largely increased. This is due to the impact on human body exerted by the hazardous factors of these high-power weapons. These factors include the notions of fugacity (the ability of the explosion to impact the surrounding environment by a shock wave) and brisance (shattering action), that is, the ability of

the explosion to fragment the surrounding environment by the ultrahigh pressure of explosive gases. The literature describes various types of mine blast closed traumatic brain injury (MB TBI) or head injury, including the severe fulminant MB TBI, the brain contusion type of MB TBI and the brain commotion type of MB TBI. A mine blast injury is always viewed as a complex polytrauma. Therefore, the clinical presentation in its victims may include the sequelae of both brain injury and cardiopulmonary/abdominal injury, as well as the fragmentation of bones. Acute patients with such injuries are given on-site first aid with immediate transfer to secondary level medical

units and then go to specialized military medical centres.

We were managing patients with remote consequences of head injuries, who were undergoing a rehabilitation program in a social medical centre for war veterans. During our survey 78.4% patients with a history of a mine blast closed traumatic brain injury (CTBI) were found to have no records of the latter fact in their medical files. We found that military physicians documented TBIs only in an open trauma or if the case of MB TBI was severe. Taking into consideration the specific situation of hostilities, such failure to recognize TBIs was due to frequently impossible early diagnosis and treatment after MB TBI (as well as difficult self-assessment) and due to various combat-related neurological and mental disorders already at early stages of the head injury (partly as complications of polytrauma involving multiple organs and systems). In view of the above reasons, the contusion-type head injury did not receive a targeted medical attention during first aid procedures.

A number of authors attribute the issue of TBI sequelae to progressive post-traumatic changes, which develop immediately post-injury. The essence of these changes is the impaired mechanism of metabolic self-regulation of nervous tissue (Hart et al., 2008; Матяш, 2011). The severe and multifaceted clinical presentation of remote sequelae of head injuries allowed many authors to continue viewing them as a traumatic brain disease or traumatic encephalopathy. The fundamental premise of this understanding includes the phenomenon of energetic and structural remodelling of cerebral structures by virtue of two antagonistic processes: the degenerative/destructive process and the regenerative/reparative process. Traumatic encephalopathy is an aggregate of neurological and mental disorders. The patterns and the severity of neurological and mental disturbances depend on the severity and the site of injury, on the pre-injury mental status of the patient, on his/her adaptive reserves, age, treatment efficiency, etc. An aggregate of complex mental abnormalities occurring in patients with post-traumatic encephalopathy, such as traumatic asthenia, traumatic apathy, psychopathic conditions (abnormal changes in personality), affective disorders, paroxysmal (epileptiform) conditions (traumatic epilepsy) and traumatic psychosis, is an important challenge, since this aggregate adversely affects the progress of disease and the efficacy of rehabilitation.

The psychotraumatic effects of hostilities and the difficult economic situation in the country are the very contemporary social stressors, which may trigger disadaptation and social stress disorders in the country's population. This enhances the dismal strain

and deepens depressive sentiments, further leading to intrapersonal and interpersonal conflicts in veterans of the Anti-Terrorist Operation (translator's note: this is an official euphemism for the current undeclared Russo-Ukrainian war). Such disadaptation may result in mental disorders and personality disorders, a surge in psychosomatic conditions (with concomitant alcohol and drug abuse, etc.) and the occurrence of post-traumatic stress disorders (PTSD) (Horowitz et al., 1980; Holmes et al., 2007). According to ICD-10 (International..., 2016), PTSD occurs as a remote and protracted response to a threatening or catastrophic event, which is able to cause a generalized distress in any human person. There is the following important consideration in PTSD: the psychogenic origin of the disorder and the unbearable (by a regular person) severity of psychogenia may be seen both in immediate victims and in the people witnessing the event. The PTSD is diagnosed no sooner than a month after the traumatic experience. The PTSD occurs after a latent period which may last from several weeks to 6 months or (rarely) several years.

The impact of the traumatic situation results in cognitive, emotional and behavioural changes of human psyche. According to current psychological studies of human personality in various situations (including traumatic situations), the behaviour-shaping characteristics include individual psychological features, the system of needs, motives, interests and the mechanisms of self-awareness (Тарабрина, 2009). Therefore, the expected outcome of applying psychotherapy as a part of multimodality management of patients with MB TBI and PTSD is to build new adaptive models of personality functioning and to create positive behavioural patterns. In a setting of a therapy group, it is possible to achieve simultaneous improvement of all basic components of relationships (cognition, emotions and behaviour), to attain a deeper restructuring of the critical characteristics of personality (such as mentality, emotions and volition). Group psychotherapy (in different variants) is the most appropriate method for rehabilitation of patients with MB CTBI and PTSD.

The treatment in a psychotherapy group (designed as a safe, comfortable and supportive environment) promotes the sense of common goals and appreciation of the person's own value. Belonging to a group reduces the sensation of isolation, promotes restoration of relationships and provides an opportunity to enrich one's experience by adopting the experiences of other people. Unlike individual therapy, therapeutic groups possess a unique feature of mutual psychotherapeutic action through interaction between group members. The peculiar

psychotherapeutic action of group psychotherapy is attributed to the inherent therapeutic factors within the group. I.D. Yalom (1985) emphasized the following of these factors:

1. Instilling hope.
2. The universality of experience.
3. Providing information (feedback).
4. Altruism.
5. The corrective review of experiences within the parent's family.
6. Promoting the development of socializing habits.
7. Imitation behaviour.
8. Interpersonal influence.
9. Group unity/acceptance.
10. Catharsis (venting).
11. Existential factors.

## 2. The aim of the study

To review the emergence of neurotic disorders in patients with MB CTBI and PTSD from the standpoint of pathogenetic concept of neurotic disorders. To study the changes of neurological and psychological abnormalities in patients with MB CTBI and PTSD in response to multimodality rehabilitation by group psychotherapy.

## 3. Materials and methods of study

At the Centre of Functional Neurology of Kyiv Regional Teaching Hospital and at the Ukrainian Public Medical and Social Centre for War Veterans we have selected 108 patients for further assessment and treatment, all of which were combat veterans with MB CTBI and PTSD (102 men and 2 women; age 20 to 42 years).

All patients had clinical and neurological assessment and psychological treatment before and after treatment. Psychological testing included the

following instruments: assessment of personality using the multilateral personality test (MLPT), an adapted and restandardised variant of the Minnesota Multiphasic Personality Inventory/MMPI (as modified by F.B. Berezin et al. (Березин et al., 1976)); the PTSD additional scale for MMPI; assessment of traits of character using the Leonhard-Shmishkek questionnaire of character accentuations; analysis of emotional state using the Lüscher's test; clinical anxiety and depression scale; the Spilberger-Chanin scale of reactive and personal anxiety; Beck depression inventory; the method of structured clinical interview; the scales for clinical diagnosis of PTSD; the scales for assessing the severity of the traumatic event's impact; Method for Determination of Individual Coping-Strategies, (MDICS), the technique developed by E. Heim.

## 4. Results and Discussion

As stipulated by the psychology of relationships, which is a foundation of V.N. Miasischev's pathogenetic concept of neurotic disorders (Мясищев, 1960), the neurotic conflict and disruptions in meaningful relationships of the personality, are one of the main causes of neurosis. Three types of neurotic conflicts are differentiated according to this theory: neurasthenic, hysterical and obsessive-psychasthenic (Tab. 1). However, there may be no direct connection between the personality's type of character and the type of the neurotic conflict.

The findings of psychological assessment in patients with MB CTBI and PTSD included the following principal neurotic disorders: asthenic syndrome in 42 patients (38.1%); anxiety and phobia syndrome in 19 patients (26.7%); hysteria-like syndrome in 8 patients (11.3%) and depressive syndrome in 17 patients (23.9%) (Fig. 1).

Both MB CTBI and PTSD, being a pair of comorbidities, impact the personality via processes of

Tab. 1. The types of neurotic conflicts

Neurasthenic:
Manifested as a conflict between the actual capacities of a person on the one hand, and the person's desires and environment-compliant expectations of themselves, on the other hand.
Hysterical:
This is such a type of conflict, which emerges when a person enters into a conflict with the surrounding reality without finding a satisfaction to their needs. Alternatively, this conflict may occur when the reality sets forth the requirements with contradict the needs of the individual.
Obsessive-psychasthenic:
This conflict occurs as a struggle between desires and duty, between moral principles and personal preferences, between instincts and ethical upbringing.

Source: own study.

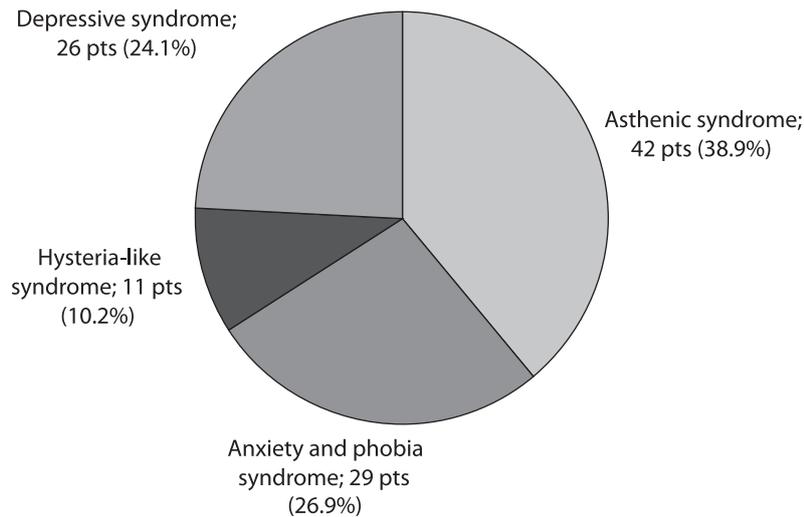


Fig. 1. Distribution of patients in terms of the dominant syndrome (108 pts)

Source: own study.

adaptation/disadaptation, which causes abnormal changes in mental and physical condition of the patients. The latter is an important factor to consider when making decisions on selecting diagnostic and therapeutic strategies for rehabilitation of ATO combatants. Therefore, we have opted for a multifaceted approach to patient management, which increases the importance and enhances the efficacy of psychotherapeutic interventions. When planning pharmacotherapy, the patients were receiving a multimodality pharmacotherapy (including nootropics, vascular drugs, analgesics, venous tone drugs and vitamin/mineral supplements). The actual selection of medications depended on somatic comorbidities and on the varying changes, presentation and progress of both MB CTBI and PTSD. In a number of cases, a prominent pain syndrome required analgesics; anxiolytics, hypnotics and antidepressants were used as required. The alcohol abuse frequently seen in ex-combatants called for pharmacological correction of alcohol-related conditions. The treatment program also included reflexotherapy (classical acupuncture, auriculotherapy and electroacupuncture).

The abnormal changes of physical and mental condition of patients with MB CTBI and PTSD inevitably change the priorities and values of the individual, disrupt meaningful personal and interpersonal relations as well as impact the ability to evaluate objective reality. Neurotic disorders have their underlying abnormal psychological mechanisms, which calls for their correction with psychotherapeutic methods (Бієр, Скотт, 2015; Ніколаєнко, 2014). We have developed a program of psychological treatment in the format of group psychotherapy. The program included the standard stages generally accepted for psychotherapy in the groups:

- psychodiagnosis;
- psychological education (this stage was intended to provide patients with information to ensure their conscious and motivated participation and acceptance of psychological counselling);
- psychocorrection.

In terms of group of objective, these were therapeutic groups; in terms of size, these were small groups (8 to 12 participants each). We used the group method with its psychotherapeutic action targeted at the predominant emotional states and self-defeating ideations (the latter having a negative impact upon the adaptive potential of the personality). In addition to that, group therapy may have some long-term objectives, such as improving interpersonal relations, personality development and unleashing the spiritual potential of the group. Unlike biological therapies, psychotherapy is targeted at the patient's personality. Therefore, to ensure an effective psychotherapeutic impact, we have taken into consideration individual constitution, character, mentality and personality traits of our patients when using group psychotherapy in patients with MB CTBI and PTSD. Although group psychotherapy was used as the main therapeutic modality, it was combined with individual therapy and family therapy.

While reviewing the available literature and psychotherapeutic experience of our colleagues, it can be seen that working with a group may involve various methodologies, such as emotive cognitive therapy, existential analysis, psychoanalysis, rational psychotherapy, behavioural therapy, systemic therapy and suggestive therapy (Кочюнас, 2010; Малкина-Пых, 2006). This being said, it should be emphasized that the tasks and objectives of group psychotherapy, the content of the therapeutic

process, the combinations of techniques used and the therapist's strategy may vary on a case-by-case basis and may derive their theoretical background from various therapeutic schools (Козлов, 2007). This involves different interpretations of psychological mechanisms behind neurotic disorders and the psychological strategies for their correction. The following considerations are common: the objective (that is, elimination of abnormal symptoms in mental, neurological and systemic somatic dimensions), the therapeutic resources of the group (based on interpersonal and group-related properties) and the ways through which the patient obtains help during group psychotherapy. All of the above include the properties of the specific therapeutic group, the individual social needs of the patients, the resources beyond the therapeutic group and the resources of the patient's own personality.

In our psychotherapeutic work with the group we have employed the method of inclusive observation, a qualitative test. Within this method, the investigator may act in either of the two roles:

- the insider;
- the neutral outsider.

This method has a format of a field study; unlike laboratory experiments, this is a real life test which requires the therapist's involvement and personal participation in group processes during the therapy. This method allows for better interaction between the therapist and the group to assess the patient's adaptation to crises and stressful situations and to assess the development of communication resources, which are essential for effective social interactions. We studied the capabilities of the patients to use their own communicational coping resources; in addition to that, the patients were trained to manage and use coping mechanisms and coping strategies to ensure their adequate response to stressors (Ткачук, 2012). Coping resources are relatively stable characteristics of the personality; these resources may improve or regress during the person's lifetime.

According to literature, in terms of function the adaptive strategies can be conventionally divided into problem-oriented (focused on cognition and directed at solving the problem) and subject-oriented (focused on emotions and directed at the person's attitude to the situation). However, the study has demonstrated that such clearly segregated division was more of a theoretical value. Stress experiences affect all spheres of human psyche; therefore, the best approach is to use a harmonious combination of emotional coping, cognitive coping and behavioural coping.

Group work included psychotechnics intended to stimulate the use of positive resources, such as

using metaphors and parables as psycholinguistic instruments, which allow seeing the problem from a new perspective, while preserving favourable ecology of relations in the group and activating patient's own problem-solving resources. Since cognitive processes initiate emotional responses, emotions impact the perception and comprehension of information, which, in turn, supports the activities of the personality (Бек, 2006). To regulate emotional and cognitive realms of psychic activity, group psychotherapy was conducted using the main methods of emotive therapy, rational therapy, cognitive therapy, behavioural therapy and psychoanalysis (Малкина-Пых, 2006). In addition to these classical methods, additional methods were used, such as body-oriented therapy, suggestive therapy (Ericsson's hypnosis), family psychotherapy, neurolinguistic programming and art therapy (Tab. 2).

The spontaneous non-directive mode of group work allowed using the benefits of group discussion for the psychotherapeutic work. The key substantial issues of group work have been described in literature and are used to conduct socio-psychological trainings. These include the following: introducing group members to each other, discussion of expectations, fears and concerns; re-experiencing and discussion of any tensions in the group; discussion of any therapist-directed resistance and aggression and the connection between such sentiments and prior experiences; exposing the problems related to autonomy and responsibility, activity and attitude to persons of authority; developing an adequate attitude to therapy; creating local norms and culture of psychotherapeutic groups; the predominantly interactive style of communication, importantly characterized by joint decision-making and implementation; review of changes in the group while highlighting the problems of each individual person; discussing the results of treatment; drawing conclusions (Слободянюк, 2014).

## 5. Conclusions

The result of this work it was concluded:

1. We have reviewed the emergence of neurotic disorders in patients with MB CTBI and PTSD from the standpoint of pathogenetic concept of neurotic disorders, the latter indicating the reciprocal connection between the personality of the patient and the adverse changes in the patient's system of relations as well as the connections with the patient's mental disorder(s). A conclusion was made that the core of the above disorders is represented by negative/self-defeating

Tab. 2. The psychotherapeutic methods and techniques used for group therapy, individual therapy and family therapy in patients with CTBI and PTSD

The method of psychotherapy	Objectives	The mechanisms of action of the method	The techniques used
Cognitive psychotherapy	The connection between emotions and cognitions. Modification of negative convictions/sentiments.	Replacement of unrealistic ideations with a realistic approach to reflection of one's experience.	The ABC formula; 'the thoughts drive the emotion'. Cognitive charts. Re-synthesis of the past; decatastrophizing; Socratic dialogue.
Rational emotive therapy	Working with symptoms of anxiety, depression and aggression.	Acquiring the experience of controlling one's own emotions and acquiring the skills of their control.	The search for rational and irrational cognitions. 'Rational emotive conceptualization', 'The upside of traumatic experience'.
Behavioural psychotherapy	The impact of cognitions on potential reconstruction. Acquisition of corrective experience.	Shaping the ability to act positively; correction of disadaptive stereotypes.	Self-instruction; Self-regulation; communication training; adaptive skills of behaviour in stress situations.
Transactional analysis	Actualisation of the Adult in the personality; reconstruction of the personality; shaping of a new value system.	Exiting negative scenarios through mutual trust; attaining autonomy; shaping of the Adult.	Definition of the Ego-state model, the MDD model; definition of transactions; Time Structuring; Life Scenario; Racket System; Games/Game Analysis; Behaviour Change Contracts.
Positive psychotherapy	Changing the viewpoint of the problem = new coping options.	Basic abilities of love and cognition.	The 5 steps: assessment, inventory; reinforcement; verbalisation; expanding goals.
Suggestive psychotherapy	Deactualization of abnormal symptoms.	Shaping of positive convictions.	The technique of inducing a hypnotic trance.
Body-oriented therapy	Comprehending somatic symptoms and living them through.	Impacting the personality via a bodily experience.	Respiratory exercise; Centre Adjustment; Vision; Sensation; Tranquillity.
Neurolinguistic programming	Reproduction of a holistic interrelation of a personality.	Creating a chart of the outside world and patient's ideas about it	The SCORE Model; TS-BS; Frame – Result; reframing.
Family psychotherapy	Restoring the resource capabilities of the family.	Development of positive and productive alternatives for family functioning.	Effective listening, empathy, dispute training.
Art therapy	Improving the patient's condition through display of emotions and cognitions on a symbolic level.	Boosting self-esteem through talent development.	The stages of therapy and diagnosis: 1) games, physical activity, drawing; 2) narratives; 3) working in small groups; 4) reflective analysis.

Source: own study.

skills and false beliefs which lead to personal and interpersonal disorders with involvement of the cognitive, emotive and behavioural aspects of human personality.

- The findings of psychological assessment in 108 patients with MB CTBI and PTSD included the following principal neurotic disorders: asthenic syndrome in 42 patients (38.1%); anxiety and phobia syndrome in 19 patients (26.7%); hysteria-like syndrome in 8 patients (11.3%) and depressive syndrome in 17 patients (23.9%).
- In our psychotherapeutic work with the group we have employed the method of inclusive observation. An investigation was undertaken into the

adaptation of patients to crises and stressful situations and the level of communicative resources and skills of interaction with the society.

- We have traced the emotive-cognitive and behavioural pathways of responding to stressors: most stressors impact the personality via processes of cognition (assessment of the stressor and formation of coping strategies and response strategies), namely:

Stress > negative efficacy > Response  
coping

- For the purpose of rehabilitation of patients with MB CTBI and PTSD, it is expedient to combine group psychotherapy with individual therapy

and family therapy. The efficiency of the group psychotherapy, which we employed for rehabilitation of patients with MB CTBI and PTSD, is based on psychotherapeutic involvement of emotive, cognitive and volitional dimensions of human psyche, thereby facilitating behavioural changes in the patients and implementation of their new acquired experience in future real-life situations.

6. As a result of multimodality treatment (including group therapy), the patients had an opportunity to acquire experience of attaining common positive goals owing to their sense of belonging to the group (the latter being a model of society). In addition to that, they developed a sense of significance of their own life experience, reconsidering the latter and perceiving it as a valuable acquisition; the patients obtained a chance to comprehend their disadaptive behavioural strategies and developed the skills of using positive adaptive strategies.

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