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Psychological and psychophysiological features of posttraumatic stress disorders among miners experienced a technogenic catastrophe*

The problem of posttraumatic stress disorders that arise from technogenic catastrophes become more and more urgent. In our country and all over the world there has lately been an increase of different kind of catastrophes. Developing after emergency situations mental disorders significantly aggravate psychosocial adaptation of the injured people and severely reduce their labor activity.

According to research data, posttraumatic stress disorders can be found in 50-80 % of people suffering from acute stress and if the intensity of the stress is rather high, every person experiences the disorders due to stress. The incidence of PTSD among the population ranges, according to different study results, from 1% to 67% of variability, due to different methods of the study, particularities of the population, and in the estimation of some authors, due to the lack of the unique approach of diagnostic criteria of these disorders. In time of peace the incidence of the cases of PTSD among other mental disorders is rather small and ranges from 0,5 to 1,2 %.

However in our country as well as all over the world the amount of different kinds of catastrophes has been rising for last decades. These situations are characterized by the extreme impact on man's mentality.

In distinction to many other stressors, the participation in the technogenic catastrophe is a psycho trauma, because its sequences can appear in a long period of time. After returning to everyday life, the injured people face a lot of problems: distress, misunderstanding from the environment, a break of interpersonal contacts, psychosomatic disorders, the formation of indifferent attitudes and etc.

The variety of reactions to stressful situation and the skills of a person to cope with changing environmental conditions have their biological basis. Specifically the efficiency of adaptation is connected to mechanisms of regulation of central nervous system. Adaptative alteration of organism functions depends on changes of the interfacing work of cerebral hemispheres. That's why if we know the type of functional asymmetry, we can forecast the development of the posttraumatic stress disorder and it will help us to choose the right method of the therapy.

Nowadays in psychophysiology they carry out researches directed to find the correlation between different particularities of asymmetry and the indices of the person's asymmetry with his individual features and ways of reaction to environmental impact. [1; 2; 3]

In the period from 2003 to 2005 in town Shakhty of Rostov region we made a

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survey of the people injured after the technogenic catastrophe and the employees of the search and rescue service of EMERCOM (Ministry of the Russian Federation for Civil Defense, Emergency Management and Natural Disasters Response) who took part in the curing the effects of this emergency situation. In the structure of disorders the first place is occupied by mental disorders, especially by posttraumatic stress disorder.

Methodological and theoretical premises of the research are the models of PTSD development—psychological, biological and multi-factor ones, contemporary ideas of causes and dynamics of the development of PTSD, data received through the studies of physiological display of the border-line mental disorders, methods of psychological and psycho physiological research of posttraumatic stress disorders. However in spite of a great number of researches concerning posttraumatic stress disorders, there is no unique generally accepted conception, explaining the etiology and mechanisms of the origin and development of PTSD.

It is necessary to underline, that regular links of lateral profiles with some mental processes (for instance, cognitive, regulatory and other styles of emotional reactions) have been established[1]. At the same time the influence of profile of lateral organization upon individual particularities of development of posttraumatic stress disorders seem not to be enough studied.

So, the analysis of literature on the problem of posttraumatic stress disorders show that at the contemporary stage the clinical typology and classification of posttraumatic stress disorders connected to consequences of a heavy psycho trauma are still under analysis. Long posttraumatic pathological states, that appear after short- or long-term extreme impact are assigned to this particular group. As the very important characteristics of a heavy psycho traumatic factor they indicate the unexpectedness, the violent onslaught of the development of the catastrophe and the duration of the pressure, as well as the repeatability at the lifetime.

Apart from the hard influence of the stressor, the sensitivity of the individual to PTSD plays a very important role, that is not only testified by such particularities as the immaturity, asthenic traits, hypersensitivity, dependence, aptitude to excessive control, desire to overwhelm unwilling emotion, but among other the victimization attitude (the tendency to become a victim in the corresponding situation) or traits of traumaphil (retention of traumatic experience). They have lately attached the importance to psycho physiological aspects of stress, particularly to the life significance of the event, including the personal attitude to the threatening situation taking into account moral values, religious and ideological world outlook. The physiological state during the catastrophe, especially somatic deterioration on the back of sleeping and eating difficulties, can be a predisposing factor.

The carried out empirical research showed that the significant number of the injured people in the consequence of the emergency situation, experiencing neurotic reactions and displaying the signs of decrease of the social adaptation at the first stage of the development of posttraumatic stress disorders, are the people with left functional asymmetry. Hereafter we could register stabilization of mental state, quan-



tity indices are near the mark, a half of respondents displayed the traces of the compensation and subcompensation. The injured people with RFA contrast by depressive state from the very beginning and the tendency of the increase of these states further. Herewith they demonstrate functional disorders and psychosomatic diseases.

THE LITERATURE

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