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Detection Of Adrenaline And Stress Conditions In Patients Using Psychoactive Substances With Hiv Infection

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ABSTRACT: The study of the adrenaline content in the blood and the manifestation of a stress state in patients using psychoactive substances (PAS) with HIV infection is one of the key indicators in the provision of medical and psychological assistance and the development of appropriate psychotherapeutic measures. When carrying out these activities, it is necessary to take into account the level of adrenaline and the severity of stressful conditions, in order to be able to overcome stress and adapt to the diagnosis.

Keywords: HIV infection, psychoactive substances, adrenaline, stress.

1. RELEVANCE.

The development of the problem of stress in modern science is reflected in the works devoted to the biochemical, physiological, clinical, psychophysiological and psychological aspects of its manifestations. The problem of stress and stress resistance remains acute and relevant both for each person and for society as a whole [2]. A variety of mental disorders in patients using psychoactive substances, when HIV infection is detected, contributes to the study of the severity of stress conditions in patients, especially when diagnosing HIV / AIDS [1].

Psychological stress manifests itself in emotional experiences, motivational-volitional, behavioral and cognitive spheres (subsyndromes). Comprehensive psychodiagnostics of stress is an important link in monitoring its multiple causes and destructive consequences, as well as a necessary part for determining the effectiveness of stress management technologies [2].

The prevalence of HIV infection among injecting drug users has increased from 12% to 60-70% in just a few years [6, 7]. A variety of mental disorders in patients using psychoactive substances, when HIV infection is detected, contributes to the study of the severity of stress conditions in patients, especially when diagnosing HIV / AIDS. Psychological stress manifests itself in emotional experiences, motivational-volitional, behavioral and cognitive spheres (subsyndromes). Comprehensive psychodiagnostics of stress is an important link in monitoring its multiple causes and destructive consequences, as well as a necessary part for determining the effectiveness of stress management technologies [2, 7]. According to ICD-

10, post-traumatic stress disorder (PTSD) occurs in response to trauma of extraordinary importance. The traumatic event must go beyond everyday human experience [4]. The defining characteristics of a traumatic event include its ability to induce feelings of fear, helplessness, or terror in response to a threat to the subject's physical integrity or life. In the development of PTSD, negative events are of particular importance, characterized by a threat to life, unpredictability and uncontrollability [3, 5].

In this regard, the study of the stress state and the level of adrenaline in HIV-infected patients using psychoactive substances in the early stages of detecting HIV infection is highly relevant.

The aim of the study is to reveal the relationship between the development of a stress state and the level of adrenaline excretion with urine in patients using surfactants with HIV infection.

2. MATERIALS AND METHODS.

Examined 72 patients aged from 28 to 54 years (average age 35 years), who are registered in the regional drug treatment clinic in Samarkand. The patients were divided into two groups: the main group of 42 patients using psychoactive substances with HIV infection, and the control group - 30 patients with drug addiction. The measurement of the phenomenological structure of experiences was carried out on the scale of psychological stress PSM-25 (Lemur – Tesier – Fillion, adaptation by NE Vodopyanova) [2]. Indicators of the PSM-25 scale of mental state were assessed on a point system as high (> 155), medium (100-154) and low (<100). The content of adrenaline in urine was determined by the spectrophotometric method [5]. The patients were examined according to the following indicators: place of residence, marital status and education. According to ethical standards, voluntary consent was taken from each patient to conduct the study.

3. RESULTS AND ITS DISCUSSION.

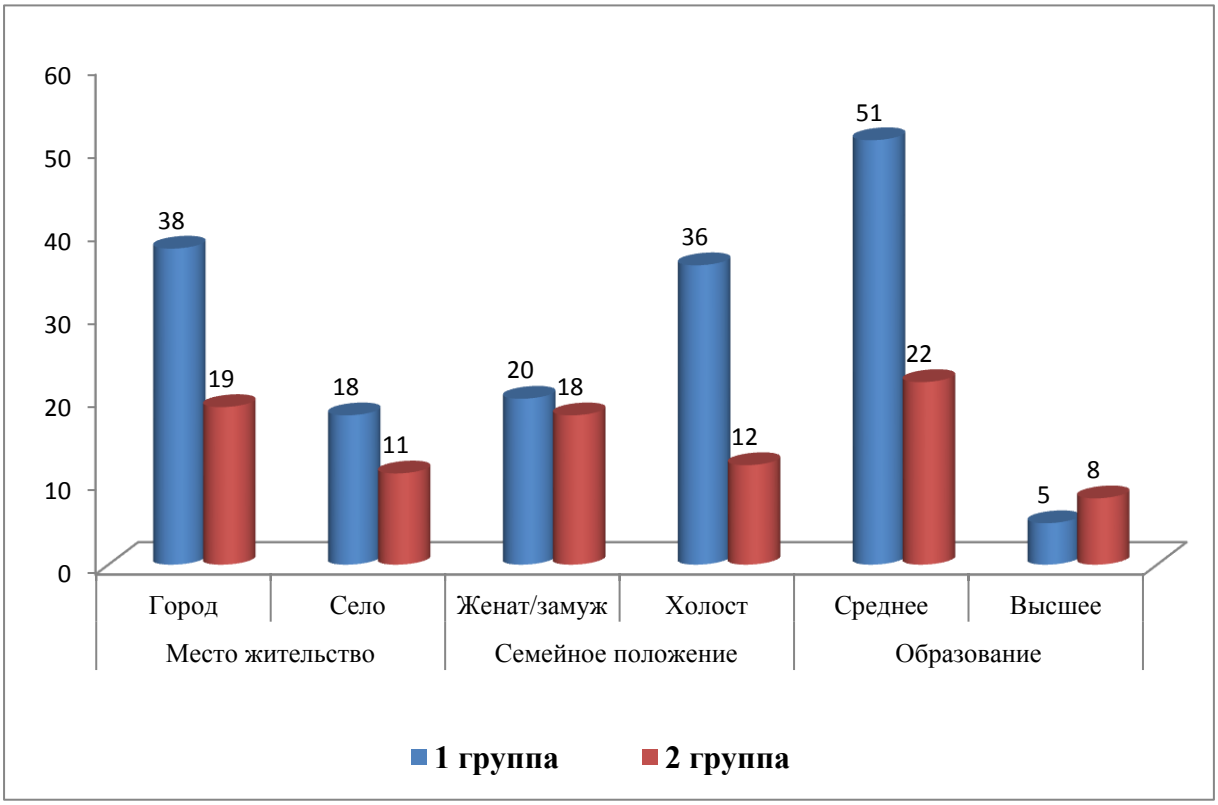
In the process of measuring the stress state among the patients of the main group, who use psychoactive substances, when HIV infection was detected, the stress indicators were found to be high level of stress (mean 173 ± 13.8). Among all the subjects, a state of severe neuropsychic tension, negative emotional experiences (exacerbation of anxiety, depression), an increase in the consumption of psychoactive substances, maladjustment and mental discomfort were noted. The average stress level (129 ± 10.3) was especially noted among single patients and patients with secondary education. Whereas patients with higher education showed a state of satisfactory adaptation. A low stress index (90 ± 7.2) was observed in patients who were characterized by a state of psychological adaptation, restrained behavior in a stressful situation, and control of emotional experiences.

Among the sick in the rural population, as well as among patients with higher education, a low level of stress was recorded.

In the control group of patients, indicators of a high level of stress were not revealed, which is obviously associated with sufficient adaptation to the diagnosis within six months. The average stress level (118 ± 9.4) indicates a state with satisfactory adaptation. Low stress score (89 ± 7.1) - state of psychological adaptation, patients are the most restrained.

Fig 1

Fig. 1. The number of patients divided into groups



The significance of the difference between the levels at ∝ = 0.95 - * P <0.001.

It turned out that the patients of the main group had a higher level of stress than the control group. This can be explained by the fact that the first detection and reporting of HIV infection, being a dramatic event, causes mental tension in a person, can lead to a breakdown of adaptation mechanisms, changes in behavior and a decrease in the control of emotions. In the control group, a certain period of adaptation to the diagnosis has passed, the mental state of patients is more stable, rational, patients are easier to navigate in a stressful situation and have greater neuropsychic stability.

Table 1 Urinary excretion of adrenaline μg / day

		Group 1	Group 2	P<
Location	City	58,2±4,7	19,7±1,6	0,001
	Village	57,5±4,6	18,7±1,5	0,001
Familystatus	Married	60,2±4,8	18,4±1,5	0,001
	Single	56,2±4,5	16,7±1,3	0,001
Education	Theaverage	56,5±4,5	18,4±1,5	0,001
	Higher	58,9±4,7	20,4±1,6	0,001

The data in Table 1 suggest the presence of increased production of adrenaline in HIV-infected patients using surfactants. In addition, an increase in adrenaline levels indicates a decrease in stress tolerance. The results obtained indicate that stressful situations influence the metabolism of biogenic amines to a certain extent. For patients with drug addiction only, the increase in the concentration of adrenaline did not differ statistically as compared with the control.

Thus, in patients using psychoactive substances, when HIV infection is detected, there is a high risk of psychological maladjustment and the development of stress conditions. To overcome these reactions, it is necessary for each patient to individually determine specific life goals, to form interests, to develop mechanisms of personal self-preservation.

4. CONCLUSIONS

When identifying and diagnosing HIV infection in patients using psychoactive substances, it is necessary to take into account the high risk of the possibility of stress conditions. In order to provide medical and psychological assistance and plan further psychocorrectional measures, it is necessary to take into account the severity of stress disorders and the level of adrenaline, given that a high level of adrenaline can negatively affect the somatic state of patients.

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