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GIYOHVANDLIKNING NEYROFIZIOLOGIK VA NEYROKIMYOVIY JIHATLARI

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kolleji, maxsus fanlar o‘qituvchisi

Annotatsiya: *Giyohvandlik - psixologik qaramlik bilan bog‘liq muayyan faoliyatga obsesif ehtiyoj. Bu "giyohvandlik"ning alkogolli, giyohvandlik va xulq-atvor variantlarini o‘z ichiga olgan giyohvandlikning keng talqinidir. Maqolada giyohvandlikni turlari, paydo qiluvchi omillar, va shu soha bo‘yicha ilmiy izlanish olib borgan olimlar fikri yoritilgan.*

Kalit so‘zlar: *Giyohvandlik, bemorning fiziologiyasi, neyrofiziologik, neyrokimyoviy moddalar, endorfin, dopamin, adrenalin, psixobioz, qaramlik va xk.*

НЕЙРОФИЗИОЛОГИЧЕСКИЕ И НЕЙРОХИМИЧЕСКИЕ АСПЕКТЫ ЗАВИСИМОСТИ

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Аннотация: *Наркомания это навязчивая потребность в определенных видах деятельности, связанная с психологической зависимостью. Это широкое толкование зависимости, включающее алкогольный, наркотический и поведенческий варианты «зависимости». В статье описаны виды зависимости, факторы, ее вызывающие, а также мнения ученых, проводивших научные исследования в этой области.*

Ключевые слова: *Наркомания, физиология пациента, нейрофизиологические, нейрохимические вещества, эндорфин, дофамин, адреналин, психобиоз, зависимость и др.*

NEUROPHYSIOLOGICAL AND NEUROCHEMICAL ASPECTS OF ADDICTION

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Abstract: *Drug addiction is an obsessive need for certain types of activity associated with psychological dependence. This is a broad interpretation of addiction, including alcohol, drug and behavioral variants of "addiction". The article describes the types of addiction, the factors that cause it, as well as the opinions of scientists who conducted scientific research in this area.*

Keywords: *Drug addiction, patient physiology, neurophysiological, neurochemical substances, endorphin, dopamine, adrenaline, psychobiosis, dependence, etc.*

Introduction. In the study of psychiatry ("narcology"), the following conditions are formed: readiness to collect and analyze patient complaints, anamnesis data, examination results, laboratory, pathological-anatomical and data, ability to determine the presence or absence of the disease, the ability to identify the main pathological condition of the patient, symptoms, syndromes, diseases, nosological forms in accordance with the International Statistical Classification of Diseases, revision and readiness to provide medical care in cases where health-related problems, sudden acute diseases, conditions, exacerbation of chronic diseases are not accompanied by a threat to the patient's life and do not require emergency medical care.

Five concepts of drug addiction The neurophysiological and neurochemical aspects of drug addiction are important and significant, along with the clinical ones, since they underlie many mental processes, including the formation of mental and physical dependence. There are many neurochemical concepts of addiction, generalized by some authors: addiction, endorphin, dopamine, adrenaline, psychobiosis.

Methodology Literature review: Systematic concepts of the endorphin concept In 1973, scientists Perth and Snyder discovered the so-called ration-opiate receptors in the reticular formation of the medulla oblongata and in the limbic system. Researchers were faced with the task of identifying opiate molecules capable of binding to these receptors. They turned out to be numerous neurotransmitters called endorphins and encephalins (encephalon - brain, in Latin), localized in pain pathways. Endorphins (the name comes from the combination of "endogenous morphine") are quite complex in structure and consist of thirty peptide chains that bind to receptors that are endogenous ligands. Other discovered endogenous substances, called enkephalins, are structurally

simple, pentapeptides, and are mediators of the central nervous system. In small quantities, they perform an analgesic function in pain shock. However, their accumulation is found in the "pleasure centers", "reinforcement zones", which are of great importance in the formation of positive emotions from euphoria to ecstasy. When taking drugs, the level of beta-endorphins increases, and their regular use leads to a decrease in opiate receptors, a secondary process associated with the stimulation of endogenous opiate production.

Main part: The addictive effect of neurotransmitters is explained by an increase in the synthesis of positive psychopharmacological effects. The connection of drug intoxication with the production of endorphins is well proven. The concept of dopamine, as mentioned above, is that there is an area in the brainstem that plays an important role in the regulation of motivation and emotional state. This area is called the "reinforcement system" and works through the neurotransmitters mentioned above, among which, in addition to endorphins, dopamine is also of great importance. Psychoactive substances cause an increase in neurotransmitters from reserves, thereby artificially contributing to the chemical activation of the reinforcement system and causing a positive emotional reaction (the mechanism of dopamine release in the nucleus accumbens is important, which is activated by many drugs. It increases dependence). With prolonged use of psychoactive substances (surfactants), as a result of the large release of neurotransmitters, their reserves are depleted, there is a noticeable deficit, which means that the reinforcement system is not sufficiently stimulated. Subjectively, this is manifested by a decrease in mood, loss of strength, emotional and mental deficiency. This process is based on the formation of mental dependence, since in this case there is a need to stimulate the reinforcement system. In response to catecholamine deficiency, the body compensates by increasing their synthesis, but it is forced to increase their breakdown by enzymes, thereby creating an accelerated cycle of neurotransmitters. This process is at the heart of physical dependence. After stopping taking the drug, the increase in neurotransmitters stops, but the increase in synthesis remains, since the enzyme systems have returned to a new mode. As a result, dopamine accumulates in the brain and blood, which to some extent explains the main manifestations of the withdrawal syndrome (insomnia, agitation, anxiety). Each drug has its own specific relationship with dopamine. Thus, amphetamine directly stimulates the release of dopamine and affects the mechanism of its transport. Cocaine and psychostimulants block the natural mechanisms of dopamine reuptake, increasing its concentration in the synaptic cleft. Morphine and nicotine mimic the effects of natural neurotransmitters, and alcohol blocks the effects of dopamine antagonists.

Research result: The concept of adrenaline in the blood - a surfactant with high levels of adrenaline and low levels of breakdown products in the blood explains the addiction to use. Disruption of catecholamine metabolism causes mental stress, excitement and anger, which requires release, moreover, withdrawal from the use of surfactants only increases catecholamine pressure. A neurochemical model is proposed to explain the single additive effect of various surfactants on psychobiosis addiction. According to their concept, drug addicts have three types of reactions: arousal, satiety, and drug addiction. When waking up, there is an increase in dopamine and norepinephrine; an increase in the level of aminobutyric acid is observed with satiety; according to the researchers, serotonin is released as drug addiction increases.

Thus, the researchers determined the nature of the drug‘s interaction with the cells as "point-like", which is carried out through specific target receptors. The approach to the problem of drug addiction and drug abuse in narcology differs from the international classification of drug addiction, which does not distinguish between the concepts of "addiction" and "drug abuse" and combines them into a single section of the use of psychoactive substances. In narcology, these concepts are separate. This is related to the legal aspect and the definition of what constitutes a drug. Thus, narcotic substances must meet three criteria: medical drugs have a specific effect on the central nervous system, which leads to their non-medical use, the influence of social narcotic substances is very widespread among the population and the consequences are so deep that they are classified as drug addiction, legal (legal) - these drugs are included in the official list of drugs. Addiction includes drug abuse that meets all three criteria: abuse of opioids, cannabinoids, cocaine, drug stimulants, hallucinogens, and narcotics.

Responsible abuse of the first two criteria of substance abuse includes tranquilizers (abuse), tablets (barbiturates), volatile organic solvents. The concept of "drug addiction" was introduced and developed to understand that drug addiction is not a separate process, but is on the same level as other "drug addiction diseases". There are two interpretations of this term. Addiction is an obsessive need to repeat a certain movement. This is a purely medical interpretation of the term as obsessive and sometimes compulsive behavior. P. Brown, M. Griffiths identifies six components for all variants of addiction: 1) salience, 2) mood changes, 3) increased tolerance, 4) withdrawal symptoms, 5) conflict with others and self (conflict), 6) relapse. Contains alcohol, the following drugs, non-chemical (behavior). types of addiction: intermediate chemical (food), some local scientists presented the following classification of non-chemical addiction: 1. Pathological attraction to gambling. 2. Erotic addiction (love addiction, sex addiction). 3. Socially acceptable addiction: business addiction, sports addiction (physical exercises), addiction to relationships, addiction to spending money

(shopping). 4. Technological addictions: Internet addiction, mobile phone addiction, other technological addictions (TV addiction). 5. Addiction to food: addiction to overeating, addiction to hunger. Western scientists distinguish between addiction to pornography and religious fanaticism.

Conclusions

Addiction (hypnosis, or drug addiction) is a mental and physical condition caused by a person's need for or use of narcotic substances, alcohol or other harmful chemicals. Drug addiction leads to many negative effects in human life, it can cause problems in society, family and personal relationships.

It is very important to seek professional help if you are facing drug addiction problems. Treatment options are available and help protect their health and improve their quality of life during the rehabilitation process.

There are several effects of drug addiction. These substances cause damage to important organs (heart, brain, pancreas) in the body. It leads to serious diseases (cancer, hepatitis, HIV). Also mental disorders such as depression, anxiety, psychosis. Anxiety and psychosomatic problems may occur.

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