

Clinical and Epidemiological Characteristics of Opium Addiction, With Concomitant Abuse of New Psychoactive Substances

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Abstract:

At the same time, according to many authors, there is currently a methodological crisis in modern Russian clinical addiction medicine. The prospects of overcoming this crisis can be judged only by separate publications devoted to the basic issues of addictology. In connection with the new "social order" associated with a significant expansion of addiction pathology, there is a need for structural changes in psychiatry and addiction medicine. According to V.D. Mendelevich, it is advisable to create an addictological service, which would be able to combine the efforts of psychiatrists, narcologists, clinical psychologists and social workers in the development of an effective strategy to counteract the spread of addictions.

Keywords: psychoactive substances, acute intoxication.

Introduction

Acute intoxication (AI) is a transient disorder following the administration of psychoactive substances (PAS), characterized by disturbances of consciousness, cognitive performance, perception, judgment, emotional state or behaviour or other psychophysiological functions and reactions. These disorders are caused by the acute pharmacological effects of the substance and conditioned reflexes to it. The cause of OI is the intake into the body, most often self-administration of surfactants in an amount sufficient to cause symptoms of acute intoxication. The pathogenesis of OI depends on the type of surfactant. In general, the observed disorders are associated with a disruption of neurotransmitter metabolism in the central nervous system (CNS) under the influence of surfactants, but in intoxication with high doses, toxic effects come to the fore, expressed, for example, in the suppression of tissue respiration, heartbeat and other vital processes. The presence of toxic impurities in the substances abused by addicts, always contained in surrogate alcohol and street drugs, should also be taken into account [1]. There are no special epidemiologic studies devoted to acute intoxication of surfactants. Since AI is an unconditional consequence of any substance use, an idea of the prevalence of this phenomenon can be made on the basis of the general prevalence of narcological diseases and the number of substance users.

Alcohol poisoning is the most serious problem in Russia. Thus, in the period from 2012 to 2017, 301,182 cases of acute poisoning from alcohol-containing products were registered in the Russian Federation, including 81,226 fatal cases (27.0%). In 2010, 4,418 people died from causes related to drug use, and 5,293 people died from drug poisoning, if the corresponding drug poisonings and poisonings with organic solvents are also taken into account. These statistics do not include poisonings of unknown etiology. In 2010, 27237 people aged 20-59 died of unknown causes in Russia. It is not known how many of them died due to OI as a result of substance use [5]. The global annual prevalence of cannabis use in 2010-2015 was estimated by WHO to be between 2.9% and 4.3% of the population aged 15-64 years. The number of annual global cocaine users ranged from 15 million to 19.3 million (annual prevalence ranges from 0.3% to 0.4%). In 2015, there were 53 million global opioid users. And opioids are the cause of 76% of all drug-related deaths [8]. Patients diagnosed with poisoning by narcotics and psychodysleptics, other (surfactants), on average account for up to 20% or more of all emergency admissions to toxicology departments. The structure of acute poisoning by such substances according to the data of different toxicological centers varies widely: - from 40 to 74% of cases are represented by poisoning by medicines, mainly psychotropic action, and from 12 to 20% - by drugs. According to the Russian Republican Center for Forensic Medical Examination, the mortality due to drug poisoning (mainly opium and opioids) is up to 14-18% of all deaths from acute poisoning, and this value does not tend to decrease [9]. According to the United Nations, in 2016, about 27 million adults in Europe used cannabis; 2.4 million people across Europe used amphetamine or methamphetamine; and there is an increasing number of new surfactants being monitored by WHO for the control of surfactant use [10]. In 2016, specialized institutions of the Ministry of Health of the Russian Federation (MH RF) recorded 2,406,702 patients with mental and behavioral disorders associated with the use of surfactants, i.e., 1.6% of the total population of the country, 78.5% of the total number of registered patients are patients with harmful use of alcohol and addiction syndrome. A simple calculation can give an approximate idea of the frequency of fixation of acute intoxication of surfactants - it is about 21.5% [2]. The diagnosis is coded using the International Classification of Diseases 10th revision (ICD-10). In the ICD-10 version adapted for Russia, 7 characters are used to formalize the diagnosis of the disorder detected in the patient. In ICD-10, OI caused by the use of various surfactants (alcohol, opioids, cannabinoids, sedatives and sleeping pills, cocaine, other psychostimulants, including caffeine, hallucinogens, nicotine, volatile solvents) and combined use of surfactants is considered in the appropriate sections, by type of substance. An OI is defined by a fourth 0 (F1x.0xx). In groups F13, F15, F16, F19, where a particular substance may be classified as either narcotic or toxicomaniac, additional letter codes are entered. If the OI is caused by a narcotic substance, the Russian letter "N" is placed at the end of the code. A narcotic substance is a surfactant that is included in lists 1 and 2 of the official "List of narcotic drugs, psychotropic

substances and their precursors subject to control in the Russian Federation". If the substance is not narcotic, it is classified as toxicomanic - the Russian letter "T" is placed at the end of the code. The clinical picture of OI is characterized by disturbances of psychophysiological functions and reactions, statics, coordination, autonomic reactions, consciousness, cognitive functions, perception, emotions, and behaviour following surfactant ingestion. The nature of the OI and the severity of the patient's condition depend largely on the dose of the substance, individual tolerance level, the initial mental and physical state of the subject, and other factors (e.g., the degree of purification of the ingested substance). Behavioral manifestations of OI are markedly influenced by cultural and personal expectations of substance exposure. The intensity of OI manifestations decreases over time and, in the absence of further substance use, its effects diminish and disappear completely. Recovery is therefore complete, except in cases where there is tissue damage or other complication. The clinical picture of OI caused by different surfactants differs. Clinical presentation of alcohol OI In alcohol OI of any severity caused by alcohol, there is usually an odor of alcoholic breath. Mild degree of alcohol OI (F10.0x1). It is characterized by elevated mood, increased motor activity, and a sense of mental and physical comfort. There may be a slight increase in parasympathetic activity in the form of decreased HR and BP, skin hyperemia. External signs of intoxication are usually fully controlled and managed by willpower Mild degree of OI is more often registered at blood alcohol concentration from 0.5 to 1.5 g/l. [3]. Medium degree of alcoholic OI (F10.0x2) The behavior of intoxicated persons gradually becomes more and more disinhibited, ceases to be controlled by willpower. Irritability, rudeness, aggressiveness, intrusiveness are often observed. Speech production becomes increasingly inadequate and uncontrolled. Loss of control over the motivational sphere, may commit inadequate actions to the situation. The sharpening of individual character traits hidden in the sober state is very characteristic. Movements become sprawling, multiple. Gait becomes shaky, uncertain. Characterized by activation of the sympathetic part of the nervous system, manifested in the form of increased heart rate, respiratory rate, the increase in blood pressure is also increased. Tendon reflexes are usually reduced, there are nystagmoid movements of the eyeballs. Medium degree OI is diagnosed at a blood alcohol concentration of 1.5-3 g/l [4]. Severe degree of alcoholic OI (F10.0x3) Motor activity decreases, patients hardly stand on their feet, often fall down. Physical weakness increases. Speech is unintelligible: intoxicated people utter fragments of words and phrases, mumble something monotonously, facial expressions are poor or absent. Productive speech contact with such a subject is virtually impossible. Orientation in place and time is often lost. Consciousness is clouded and may reach the degree of coma (F10.05x). Vomiting, hiccups, and involuntary urination may be observed. The skin is pale, cold, moist. Heart tones are muffled, palpitations are observed, pulse is frequent, weak filling and tension. Arterial pressure is decreasing. Breathing is shallow, rapid, may become pathologic. Neurological symptoms are revealed: decrease or absence of

conjunctival, pain reflexes, pupils dilated, reaction to light is weak, spontaneous horizontal nystagmus is observed. Tendon reflexes are reduced or absent. The severe degree of alcoholic OI is diagnosed at a blood alcohol concentration of 3-5 g/l [7]. Complicated forms of alcoholic OI. In addition to somatic complications (F10.02x) and seizure disorders (F10.06x), psychopathologic complications may be observed. Delirium (F10.03x) may develop in intoxication (usually in persons with concomitant somatic pathology - acute pancreatitis, etc.). Pathological intoxication (F10.07x) is quite rare.

Conclusions: This condition is a manifestation of a peculiar idiosyncrasy to alcohol, a short-term acute psychosis occurring after the use of small doses of alcohol, sometimes insufficient to cause even mild intoxication in most people (below 0.40 g/L). The clinical picture is dominated by crepuscular obscuration with pronounced affective disorders (anxiety, fear, anger), hallucinations, transient delirium, motor agitation, aggression. The crisis ends with deep sleep, and the period of psychosis is usually amnesized [9].

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