ALCOHOLISM AND ITS COMPLICATIONS

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Annotation

Rational pharmacotherapy of alcohol dependence includes such areas as enhancing GABA neurotransmission, suppressing glutamate neurotransmission, influencing serotonin neurotransmission, correcting water-electrolyte balance and replenishing thiamine deficiency. Treatment of alcoholism consists of two stages: 1) prevention and treatment of alcohol withdrawal syndrome and its complications - withdrawal seizures and alcoholic delirium; 2) anti-relapse (maintenance) therapy.

Key words: *alcohol abuse, alcohol addiction, alcohol detoxification, relapse prevention, maintenance therapy, benzodiazepines.*

Introduction

Benzodiazepines are the drugs of choice in mitigating alcohol withdrawal and preventing hangover seizures and alcoholic delirium. Diazepam and chlordiazepoxide are most often used for this purpose, while older people and patients with severe forms of liver damage are prescribed safer oxazepam and lorazepam. A certain alternative to benzodiazepines are anticonvulsants with mood-timing properties - carbamazepine, valproic acid preparations, topiramate and lamotrigine. Alcohol abuse is a direct cause of at least 60 diseases and an indirect cause of approximately 200 more.

Excessive alcohol consumption is one of the leading causes of premature death, which is of particular importance for the Russian Federation. The share of alcohol-related deaths worldwide ranges from 3.5 to 5% of the total mortality of the population, while in the Russian Federation these figures are much higher: according to A.V. Nemtsov, up to 29% of male and up to 17% of female deaths in our country is one way or another due to alcohol consumption.

Diseases and accidents associated with alcohol (including alcohol damage to internal organs and the nervous system, injuries and burns received while intoxicated) create a significant burden on healthcare institutions and cause serious damage to the economy; timely recognition and effective treatment of alcohol

disorders, like any other socially significant diseases, not only corresponds to the principles of humanity, but also carries obvious economic benefits for the individual and society.

Material and methods

There are the following types of alcohol use disorders.

• alcohol abuse (alcohol misuse);

• risky use;

• drinking alcohol with harmful consequences (harmful use);

• alcohol dependence, or alcoholism.

In accordance with the International Classification of Diseases, 10th revision (ICD-10), alcohol dependence is diagnosed when three or more signs from the list below are present at the same time during the last year:

• strong or irresistible desire to drink alcohol,

• difficulty controlling alcohol consumption,

• withdrawal state when stopping or reducing the dose of alcohol,

• tolerance, or the need to increase the dose to achieve the same effects,

• increasing neglect of other sources of pleasure and activities due to an increase in the time spent on drinking alcohol and the subsequent restoration of a normal state,

• continued alcohol consumption despite to obvious harmful effects on physical and mental health.

Similar, although not identical, criteria are used in the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV). As in ICD-10, for the diagnosis of alcohol dependence requires the presence of three or more of the following symptoms observed at any time during the last 12 months:

• alcohol tolerance,

• a withdrawal state upon cessation of use, relieved or eliminated by new intake of alcohol or a related substance,

• frequent drinking of alcohol in large quantities and for a longer period of time than expected,

• a constant desire or repeated unsuccessful attempts to stop or reduce alcohol consumption,

• spending a large amount of time purchasing and consuming alcohol and subsequent restoration of normal well-being,

• significant reduction or cessation of social, professional or recreational activities,

• continued drinking despite persistent or recurrent adverse physical or psychological consequences.

Pharmacotherapy for alcoholism2 is usually carried out in
two stages: 1) treatment of acute alcohol use disorder, or
alcohol detoxification; 2) anti-relapse or maintenance therapy.

Despite the name accepted in the scientific literature and everyday life, the concept of alcohol detoxification (alcohol detoxification) is not identical to the concept of clearance detoxification (clearance detoxification) and does not imply a change in the composition of the blood by “cleansing” it using intravenous drip infusion of plasma-substituting solutions or, especially, methods extracorporeal detoxification - such as hemosorption or plasmapheresis. Alcohol detoxification involves cessation of alcohol consumption and mitigation of acute alcohol disorders with pharmacological analogues of alcohol - gamma-aminobutyric acid (GABA) agonists, and primarily benzodiazepine derivatives.

Result and discussion

The drug of choice in the treatment of acute alcohol disorders is diazepam, which has pronounced and prolonged sedative, anxiolytic (anti-anxiety), hypnotic and anticonvulsant effects, and also has a significant ability to prevent and relieve delirium delirium.

Close to diazepam in terms of effectiveness in the treatment of acute alcohol disorders is chlordiazepoxide. In some countries, such as the UK, diazepam is more often used in hospital treatment, while chlordiazepoxide is more likely to be used in outpatient treatment programmes. In elderly patients and those with severe liver damage that impedes drug clearance, oxazepam or lorazepam, which have a short plasma half-life, are usually prescribed instead of diazepam and chlordiazepoxide.

A definite alternative to benzodiazepines in mitigating alcohol withdrawal are anticonvulsants: carbamazepine, valproic acid preparations and newer anticonvulsants - lamotrigine and topiramate.

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A common metabolic consequence of alcohol abuse is thiamine (vitamin B1) deficiency, which underlies Wernicke-Korsakoff syndrome (as well as, among other factors, Marchiafava-Bignami disease, central pontine myelinolysis and alcoholic cerebellar degeneration) and peripheral polyneuropathy, and Therefore, parenteral administration of this vitamin is a necessary component of the complex treatment of patients with alcohol use disorders and the prevention and/or treatment of acute and subacute alcoholic encephalopathy.

Conclusion

According to numerous clinical studies, meta-analyses and Cochrane reviews (the length of the article allows us to refer to only a few of them), antipsychotics (with the exception of special isolated cases and certain drugs with special properties, primarily the above-mentioned aripiprazole with atypical dopaminergic effects) do not influence alcohol dependence or worsen the course of alcoholism (which the author of this article is inclined to explain, among other reasons, by the deterioration of cognitive functions under the influence of antipsychotics).

Alcohol abuse is characterized, along with other neurochemical changes, by a decrease in dopamine content in the prefrontal cortex of the brain; It is assumed that dopamine deficiency, along with other factors, plays a key role in the formation of the need for alcohol.

Antipsychotics, acting as dopamine antagonists, help reduce its content in different parts of the brain; It would be logical to assume that the worsening of its deficiency in the prefrontal cortex would rather contribute not to weakening, but, on the contrary, to activation of behavior aimed at drinking alcohol. It should also be emphasized that craving for alcohol (as well as for other psychoactive substances) is not included in the list of indications included in the formularies of antipsychotics used in our country and, thus, their prescription for the purpose of suppressing this craving is not justified and does not comply with current legislation.

The traditional target of anti-alcohol therapy is cases of alcohol dependence. However, it is of great importance for public health to recognize cases of alcohol abuse without signs of dependence, but with obvious negative medical

consequences. Identifying this type of alcohol use disorder and providing assistance to patients is usually not the job of psychiatrists or narcologists, but of general clinical practitioners, including neurologists, cardiologists, gastroenterologists and other specialists.

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