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Metabolic Properties of Alcohol Products

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Abstract: Consumption of alcohol in large quantities leads to a significant increase in mortality. For example, a study found that people who consumed 5 or more units of alcohol on drinking days had a 30% higher mortality rate than those who consumed only one unit.

Keywords: Alcoholic, number of deaths, alcohol dehydrogenase, body weight, height, the amount.

INTRODUCTION

Depending on the dose, routes of entry into the body, individual hereditary characteristics of the body, as well as the body's tolerance to toxic doses of ethanol, the manifestations of various psychophysiological effects and the degree of their severity can be very different. Alcoholic beverages can have an adverse effect on the metabolism of many drugs in the human body. Even a single use of ethyl alcohol is a direct contraindication to the prescription of a number of medications [1-6].

Ethyl alcohol poisoning over a long period has occupied a leading place among household poisonings in terms of the absolute number of deaths [7-14].

Persons in whom the described effects of alcohol are clearly expressed and prolonged over time are more predisposed to the formation of pathological alcohol dependence[15-20].

The rate of intoxication and its intensity varies among different peoples, and between men and women (this is due to the fact that the isoenzyme spectrum of the enzyme alcohol dehydrogenase (ADH) is genetically determined - the activity of different isoforms of ADH has clearly defined differences in different people)[1]. In addition, the characteristics of intoxication also depend on body weight, height, the amount of alcohol consumed and the type of drink (presence of sugar or tannins, carbon dioxide content, strength of the drink)[1]. For a given person, the approximate concentration of ethanol in the blood can be calculated using the formula of E. Widmark. Calculating blood alcohol using this formula makes it possible, based on the amount of alcohol consumed, to predict the maximum possible concentration of ethanol in the blood or, conversely, with a known concentration of ethanol in the peripheral blood, to calculate the amount of alcohol consumed.

Method and results

A 23-year epidemiological study of 12,000 male English doctors aged 48–78 years found that overall mortality was significantly lower in the group consuming two "units" (one unit = 10 ml or 8 grams of pure ethanol) of alcohol per day. day, compared to the group of non-drinkers. Consuming more than two units of alcohol per day has been associated with increased mortality.

This is consistent with other epidemiological studies that find a J-shaped relationship between the amount of alcohol consumed and mortality among middle-aged and older men. While the mortality rate for quitters and heavy drinkers is significantly increased, mortality (total from all causes) is 15-18% lower among light drinkers (1-2 units per day) than among non-drinkers, according to metadata. analysis. These findings were questioned by another study, which found that some low-quality epidemiological studies combined very infrequent drinkers as well as former drinkers with a group of non-drinkers, resulting in increased mortality in the non-drinker group. However, the J-shaped curve for total and cardiovascular mortality has been confirmed by studies that controlled for these and other factors.

The observed reduced mortality in the group of moderate drinkers, compared with non-drinkers, is partly explained by the better social status and quality of health of moderate drinkers. However, the protective effect at low to moderate amounts remains significant even after adjustment for these factors. Additionally, factors such as underreporting of alcohol intake may result in a heavy drinker being classified as a moderate drinker and may therefore underestimate the observed protective effect of low doses.

Consumption of alcohol in large quantities leads to a significant increase in mortality. For example, a US study found that people who consumed 5 or more units of alcohol on drinking days had a 30% higher mortality rate than those who consumed only one unit. According to another study, drinkers who drink six or more units of alcohol (at one time) have a 57% higher mortality rate than drinkers who drink less. A study of the relationship between mortality and tobacco use found that complete cessation of tobacco along with moderate alcohol consumption resulted in a significant reduction in mortality. According to a study conducted among older adults in California, moderate (10–20 grams of alcohol per adult male) alcohol consumption had a beneficial effect on life expectancy among older men and women.

Discussion

The potency of ethanol depends on the dose, tolerance to the toxicant (liver hypertrophy) and the degree of individual expression of isoenzymes, depending on the genome.

As a result of the effect on the cerebral cortex, it causes intoxication with characteristic alcoholic arousal. In large doses it causes an anesthesia effect. The depressant effect on the central nervous system is primarily due to stimulation of GABA receptors and antiglutamatergic activity. In ethanol poisoning, glycogenolysis develops; Nausea, vomiting and dehydration are typical. Thiamine deficiency due to malabsorption is typical. In ordinary poisoning (alcohol intoxication), ethanol impedes sensory perception, reduces attention, and weakens memory. This is characterized by a disorder of associative processes, as a result of which defects in thinking, judgment, defects in orientation and self-control appear, and a critical attitude towards oneself and surrounding events is lost. As a rule, there is an overestimation of one's own capabilities. Reflex reactions are slower and less accurate. Talkativeness often appears. In the emotional sphere - euphoria, decreased pain sensitivity (analgesia). Spinal reflexes are inhibited and coordination of movements is disrupted. In a large dose, excitement is replaced by depression and sleep occurs. In severe ethanol poisoning, a stuporous or comatose state is observed; the skin is pale, moist, breathing is rare, the exhaled air smells of ethanol, the pulse is rapid, the body temperature is low. The average lethal dose is about 6-8 g/kg of body weight (for anhydrous alcohol, for an "untrained" organism). According to some sources, the range is from 4 to 12 g/kg. Due to the fact that alcohol in the vast majority of cases is consumed orally, the effectiveness of the dose and the likelihood of delirium or death largely depends on the rate of

administration, the contents of the gastrointestinal tract, gender, and constitutional characteristics. From the conclusion on alcohol metabolism, the following biochemical processes can be suggested (fig-1).

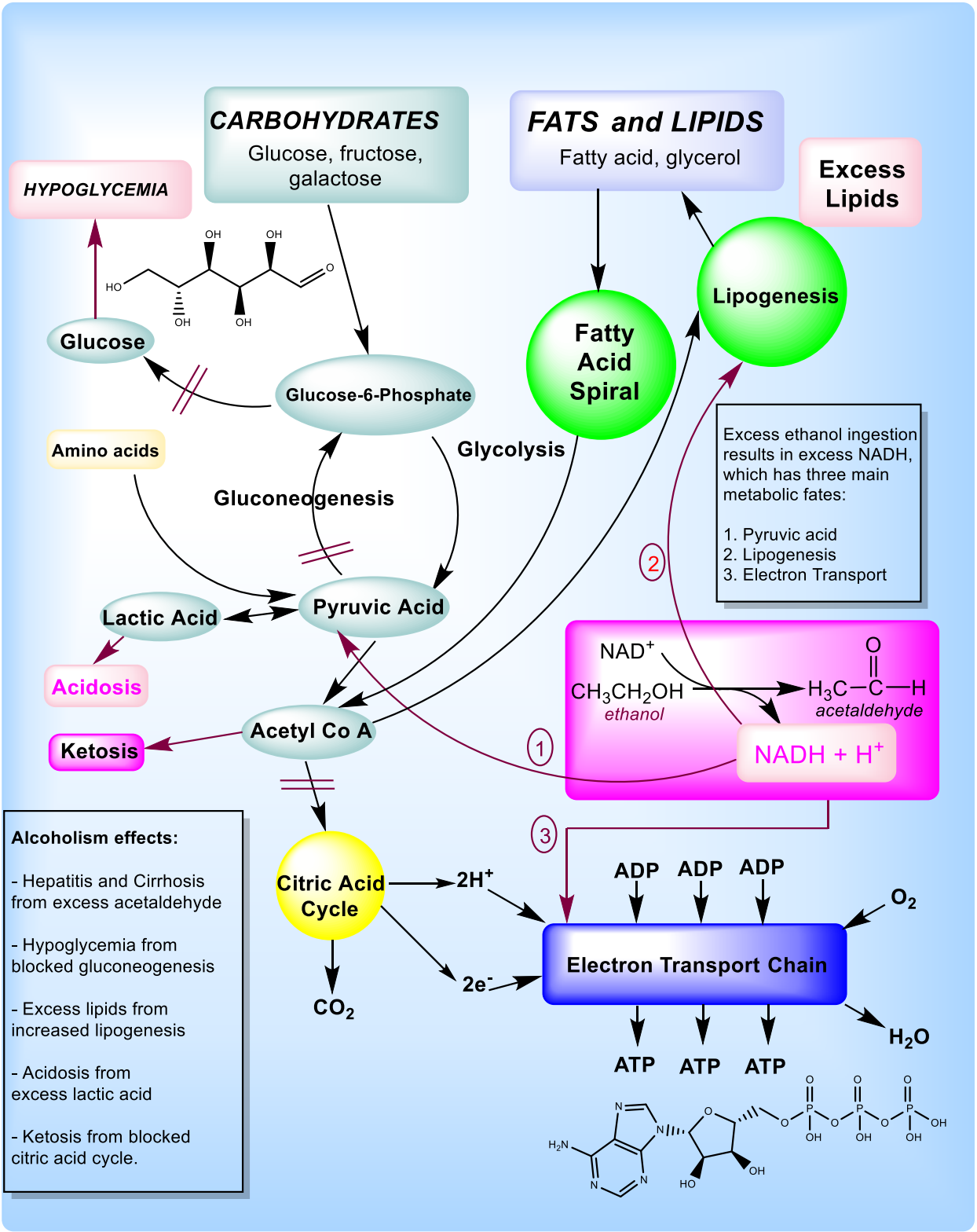

Fig-1. Conclusion on alcohol metabolism

Conclusion

When drinking alcoholic beverages, a person can develop alcoholism - dependence on ethanol, leading to negative health consequences!

Children raised in alcoholic families may potentially suffer emotional distress as they enter their own serious relationships. These children are at higher risk of divorce and separation, unstable family conditions and family breakdown. Feelings of depression and antisocial behavior experienced in early childhood often contribute to family conflict and domestic violence. Women are more likely than men to be victims of alcohol-related domestic violence.

Literature

1. Шахидаятов Х.М. Органическая химия. Ташкент-2014. С-159
2. Saitkulov, F. E., Tashniyazov, A. A., Mamadrahimov, A. A., & Shakhidoyatov, K. M. (2014). 2, 3-Dimethylquinazolin-4 (3H)-one. Acta Crystallographica Section E: Structure Reports Online, 70(7), o788-o788.
3. Saitkulov F. et al. Titrimetric analysis of calcium cation in" obi navvot" variety of melon //Академические исследования в современной науке. – 2022. – Т. 1. – №. 19. – С. 302-304.
4. Saitkulov, F., Azimov, I., Ergasheva, M., & Jo‘raqulov, H. (2022). Carbohydrates are the main source of energy in the body. *Solution of social problems in management and economy*, *1*(7), 68-71.
5. Saitkulov, F., Ibragimov, B. R., Allaqulova, M., Umarov, S., & Xolmatova, M. (2022). The role in the plant and the functions of nutrients. *Инновационные исследования в науке*, *1*(16), 29-31.
6. Saitkulov, F., Farhodov, O., Olisheva, M., Saparboyeva, S., & Azimova, U. (2022). Chemical feeding method of lemon plant using leaf stomata. *Академические исследования в современной науке*, *1*(17), 274-277.
7. Boymuratova, G. O., Saitkulov, F. E., Nasimov, K. M., & Tugalov, M. (2022). To Examine the Processes of Biochemical Action Of 6-Benzylaminopurine with Cobalt-II Nitrate Dihydrate on the “Morus Alba” Variety of Moraceae Plant. *Eurasian Journal of Physics, Chemistry and Mathematics*, *3*, 39-42.
8. Saitkulov, F., Uralova, B., Ermonova, O., Mamurova, M., & Karimova, K. (2022). Biochemical nutrition family plant rute-lemon leaved. *Академические исследования в современной науке*, *1*(17), 268-273.
9. Saitkulov, F., Begimqulov, I., O‘ralova, N., Gulimmatova, R., & Rahmonqulova, D. (2022). Biochemical effects of the coordination compound of cobalt-ii nitrate quinazolin-4-one with 3-indolyl acetic acid in the “amber” plants grades phaseolus aureus. *Академические исследования в современной науке*, *1*(17), 263-267.
10. Sapaev, B., & Saitkulov, F. (2023, January). Chromato Mass Spectrometric Analysis Using Essential Oils. In *Международная конференция академических наук* (Vol. 2, No. 1, pp. 123-126).
11. Saitkulov, F., Elmuradov, B., O’lmasova, K., & Alijonova, A. (2023). Studying the properties of the uv spectra of quinazolin-4-ones and–tions. *Development and innovations in science*, *2*(1), 24-27.
12. Murodillayevich, K. M., Shoyimovich, K. G., & Ergashevich, S. F. (2023). Studying the Aroma of Mint Essential Oil. *international journal of biological engineering and agriculture*, *2*(1), 54-56.
13. Kholmirzaev, M., Khaydarov, G., & Saitkulov, F. (2023). Determination of simple esters in mint by the method of chromatomass spectroscopy. *International Bulletin of Medical Sciences and Clinical Research*, *3*(1), 70-72.

14. Kholmirzaev, M., Khaydarov, G., & Saitkulov, F. (2023). Spectral character of the simple of ethers. *Theoretical aspects in the formation of pedagogical sciences*, *2*(2), 204-206.
15. Tilyabov, M., Khaydarov, G., & Saitkulov, F. (2023). Chromatography-mass spectrometry and its analytical capabilities. *Development and innovations in science*, *2*(1), 118-121.
16. Tilyabov, M., Khaydarov, G., & Saitkulov, F. (2023). Chromato mass spectrometric analysis using mint essential oils. *International Bulletin of Medical Sciences and Clinical Research*, *3*(1), 57-60.
17. Saitkulov, F., Elmuradov, B., O'lmasova, K., & Alijonova, A. (2023). preparation of a mixed coordination compound cobalt-ii nitrate hexahydrate with quinazoline-4-one and 3-indolylacetic acid on "amber" plants of the phaseolus aureus variety. *Science and innovation in the education system*, *2*(1), 81-87.
18. Azamatova, M., Meliyeva, S., Azamova, S., Sapaev, B., & Saitkulov, F. (2023). Healing properties of chamomile. *Академические исследования в современной науке*, *2*(8), 37-40.
19. Saitkulov, F., Abdukadirov, S., Ashurova, N., Turapov, J., & Zoxidjonova, A. (2022). Recommendations for the use of fats. *Theoretical aspects in the formation of pedagogical sciences*, *1*(7), 175-177.
20. Amirova, N., Qulmaxamatova, D., Bebitova, K., Saitkulov, F., & Nasimov, K. (2023). Technology of creating cool beverages rich in vitamins based on rose hip fruit. *Theoretical aspects in the formation of pedagogical sciences*, *2*(5), 169-172.