MODERN MEDICINE AND PRACTICE
https://www.innovatus.es/index.php/ejmmp
EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE
Vol. 2 No. 3 (2022) EJMMP ISSN: 2795-921X

MORPHOLOGICAL FEATURES OF THE LUNG IN ALCOHOLISM

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Abstract: *Pneumonia and chronic respiratory failure are the most common complications of alcohol consumption. In an experiment on animal models, it was established that excessive consumption of ethanol led to dysfunction of the mucociliary apparatus, which is the cause of the chronic respiratory system, that is, clearing the lower respiratory tract. The function of alveolar macrophages was also impaired.*

Key words: *chronic alcoholism, rats, lungs, experiment, morphology.*

Introduction. The great medical and social significance of the problem of alcoholism is well known. In practical healthcare, its solution is assigned to narcologists, whose efforts are aimed at suppressing the mental and physical dependence on alcohol. At the same time, little attention is paid to damage to internal organs. The only exceptions are alcoholic cardiomyopathy and liver damage in alcoholism, the pathogenesis and morphogenesis of which has been intensively analyzed, especially in recent years [1-24, 28,29,30]. Lung pathology has been studied to a lesser extent, although it is respiratory diseases that occupy the first place in the structure of the general morbidity of people who abuse alcohol [25,27,29]. Chronic inflammatory diseases of the respiratory organs account for about 7% in the overall structure of morbidity; among the causes of death, they take the 4th place after cardiovascular, oncological diseases and injuries. [2,4,5,8, 28-38,]. Many researchers believe that in the pathology of the lungs in patients with alcoholism, the leading place belongs to chronic nonspecific diseases [9-14,17-27]. Alcohol mortality is not limited to alcohol poisoning and death from violent causes (murder, suicide), it includes a significant percentage of deaths from alcohol-related somatic pathology [4].

In addition, studies conducted in this direction, in the dynamics of the formation of chronic alcohol intoxication, allow us to determine that a single use of a moderate dose of ethanol in the development of pneumonia is of no small importance, since the works are devoted to determining the amount of ethanol administered or the duration of its use as risk factors, to reduce anti-infective resistance of the lungs. However, there is still a clear concept of the state of various links of anti-infective resistance of the lungs in alcohol intoxication. The respiratory system as a whole seems to be a target for chronic alcohol abuse.

Objective. The purpose of this study was to study in experiment the nature of pathomorphological changes in the respiratory organs in chronic alcoholism in rats.

Materials and methods. The study was carried out on 25 white outbred rats weighing 180-210 g. The animals were divided into 2 groups, in 10 rats they reproduced physiological saline by intragastric administration, served as control. Animals of the 2nd series were injected intragastrically with ethanol at a dose of 10 mg/kg of body weight. Animals were slaughtered 3,7,15,30 days after exposure to ethanol and were removed from the experiment at 3 months of age by instantaneous decapitation of animals under ether anesthesia. The lung extracted from the chest was fixed in 10% formalin solution and embedded in paraffin

according to generally accepted rules. Next, histological sections were prepared with a thickness of 6-7 μm, which were stained with hematoxylin and eosin. Morphological studies of lung tissue were studied under a Leyka microscope. The process of experiments on laboratory animals was carried out in accordance with the Declaration of the International Medical Association, adopted in Helsinki in 1964 and completed in 1975, 1983, 1989, 1996, 2000, 2002, 2004, 2008, 2013.

Results of own research and discussion. Microscopic examination of the lung in the early stages revealed edema, a dyscirculatory disorder, and the cellular composition revealed the breakdown of lymphocytes in the form of karyopyknosis and karyolysis. In an experiment on rats, it was found that oral ethanol has a short-term effect on lung tissue and causes aspiration pneumonia, and the drainage function of the bronchi and atrophy of the ciliated epithelium were also impaired. Histologically, there are foci of acute emphysema, spasm of small arterioles, and on the 15th day in the parenchyma, atrophic changes in the lung were revealed the following changes.

On the 30th day after the introduction of ethanol, there was a pronounced dysfunction of alveolar macrophages, immune cells incapable of phagocytosis. Structural changes in cells included loss of cilia and metaplasia. We also found an increase in the number and size of glands, more abundant lymphoid cell infiltration of the stroma with fibrosis and sclerosis in the lung tissue, microcirculation disorders in the lungs. In the bronchi, signs of chronic bronchitis and bronchiolitis of varying degrees were found, and the number of goblet cells was also increased. In an animal model experiment, it was found that excessive consumption of ethanol led to dysfunction of the mucociliary apparatus which is the cause of a chronic respiratory system, i.e. clearing of the lower respiratory tract. The function of alveolar macrophages was also impaired. Against the background of taking ethanol, ventilation, diffusion and pulmonary blood flow were impaired.

Conclusions: Thus, the study of the combined course of respiratory diseases and alcoholism is an urgent task of modern medicine.

Research in this direction is of fundamental importance for the development of new approaches to the treatment and prevention of lung diseases in patients with alcoholism. In conclusion, I would like to note that researchers and clinicians have only begun to study the problem of alcohol damage to the respiratory system. This gives hope that the negative effects of alcohol on respiratory health can be significantly reduced in the relatively near future.

Bibliography

1. Avdeeva T.G. Influence of mother's alcoholism on the state of health of the newborn / T.G. Avdeeva, I.L. Alimova // Pediatrics. - 1994. - No. 5. - from. 57-58.
2. Alekhina I.P. Hereditary alcoholism: some neurochemical and genetic mechanisms / I.P. Alekhina, A.G. Vertinskaya, N.L. Vekshina // Bulletin of the Russian Academy of Medical Sciences. - 1999. - No. 6. - S. 43-47.
3. Apanova O.I., Shelekhin A.A. Community-acquired pneumonia with the addition of a nosocomial infection in persons with chronic alcohol intoxication / / News of science and technology. A series of honey. Issue. Alcoholic disease / VINITI. 2003. No. 6. C. 1-3.
4. Anokhina I.P. Central mechanisms of predisposition to dependence on psychoactive substances / I.P. Anokhin, N.L. Vekshin, A.G. Vertinskaya // Journal of Neurology and Psychiatry. S.S. Korsakov. - 1997. -№12. - P.83-84.
5. Akhmadeeva E.N. Fetal alcohol syndrome / E.N. Akhmadeeva, E.K. Alekhin, N.R. Khusamova //Health care of Bashkortostan. - 1996. - No. 2-3.-S. 46-51. 1. Abdul Rahman S.A.Sh. Three-dimensional

morphology of rabbit thymus lobules in ontogenesis: Abstract of the thesis. dis. cand. honey. Sciences. Volgograd. 1997. 19 p.

6. Abdrashidov A.Kh. Consumption of ethanol by rats under conditions of free choice, as well as when giving ethanol solutions as the only source of liquid // Biological bases of alcoholism. M.: Medicine, 1984. S. 197-199.
7. Altshuler V.B. Alcoholism. M., 2010. 264 p.
8. Balika Yu.D., Kartashova V.E., Skosyreva A.M. The impact of alcohol intoxication of pregnant rats on the hematopoietic system of their offspring // Obstetrics and Gynecology. 1982. No. 9. S. 56-57.
9. Ganapolsky V.P. The system of opioids and stress hormones in severe mechanical trauma and ethanol intoxication. Diss. honey. Sciences. St. Petersburg, 2003. 108 p.
10. Kazarnovskaya M.JI, Vasilos A.F., Dmitrienko V.D. Mutagenic effect of ethyl alcohol on human cell culture // 1st All-Union. congress of forensic doctors. Tez. report Kiev, 1976. S. 594-595.
11. Kampov-Polevoy A.B., Zhukov V.N. Study of the initial need for alcohol in a population of laboratory rats. // Dep. at VINITI. 1979. No. 82779.
12. Beatty M. An alcoholic in the family or overcoming addiction: Per. from English. / M. Beatty. - M., 1997. - 331 p.
13. Voloshin V.M. Status and prospects for the development of children's psychiatric services in Russia / V.M. Voloshin, B.A. Kazakovtsev, Yu.S. Shevchenko, A.A. Northern // Social and clinical psychiatry. - 2002. -T. 12. Issue. 2.-p.5-9.
14. Garmash I.V. Ryabova A.V., Ezhova L.G. and others. Severe pneumonia in a patient with alcoholic cirrhosis of the liver, cytopenia and DIC (possibility of modern therapy)//News of science and technology. A series of honey. Issue. Alcoholic disease / VINITI, 2003. No. 6.C.1-3.
15. Gurieva V.A. Clinical and forensic adolescent psychiatry / V.A. Gurieva, T.B. Dmitrieva, E.V. Makushkin, V.Ya. Gindikin and others - M.: Medical Information Agency, 2007. -488 p.
16. Emelyantseva T. A. The role of a family with alcohol problems in the formation of deviant behavior in adolescents / T.A. Emelyantseva // Proceedings of young scientists. - Minsk, 2000. - p. 142-144.
17. Emelyantseva T.A. Results and prospects of psychotherapeutic work on the primary prevention of alcohol and drug addiction among adolescents / T.A. Emelyantsev. - Minsk, 2001. - p.210-217.
18. Krupskaya T.S. The state of lipid metabolism in newborns born from mothers who drink alcohol during pregnancy: Abstract of the thesis. dis.... cand. honey. Sciences / T.S. Krupskaya. - Stavropol, 1992. - 25 p.
19. Miroshnichenko JI. D. Narcological Encyclopedic Dictionary in 2 parts. - Part 1. Alcoholism / L.D. Miroshnichenko, V.E. Pelipas. - M.: Anaharsis, 2001. - 190 p.
20. Mirakyan L.A. Morphological studies of the mucous membrane of the upper respiratory tract in chronic alcohol intoxication in an animal experiment//Journal. Ear, nose, throat diseases 1988. No. 3. C 28-30.
21. Moiseev B.C. Markers of alcoholic disease / B.C. Moiseev // New honey. zhur. - 1996. - No. 4. - S. 24-27.
22. Naydenova N.G. Gordeev M.N. Alcoholism and pathology of the respiratory organs // Narcology. 2002. No. 4. P. 23-26.

23. Nalichko N.N. Aspiration pneumonia on the background of alcoholism// Clinical. Medicine. 1990. No. 4. P. 85-87.
24. Hovers L.Ya. , Ovchinnikov Yu.M., Drozdov E.D., Kudryashova N.D. The state of the ENT organs in patients with chronic alcoholism//Vestn.otoloroningologii.1986.No.3.S.71-73.
25. Arnold R. Patient attitudes concerning the inclusion of spirituality into addiction treatment / R. Arnold // J. Subst. Abuse treat. Dec. V. 23. Xa 4. 2002. -P. 90 - 94.
26. Burke R. Workaholism and divorce among Australian psychologists / R. Burke, Z. Burgess, F. Oberklaid // Psychol. Rep. Aug. - V. 93. No. 1, 2003. - P. 29 - 32.
27. Christodoulou G.N. The delusional misidentification syndromes: strange, fascinating, and instructive / GN. Christodoulou, M. Margariti, V.P. Kontaxakis // Curr. Psychiatry Rep. - 2009. - No. 11(3). - p. 185-189.
28. Coleman-Kennedy C. Pendley A. Assessment and diagnosis of sexual addiction / C. Coleman-Kennedy, A. Pendley. - J. American Psychiatric Nurses Association. –
29. H.Y. Kamolov Lung morphological characteristics in chronic alcoholism 2 (34)2021 New Day in Medicine p 235-237
30. Khamroev X.N., Tukhsanova N.E. Characteristic of morphometric parameters of internal organs in experimental chronic alcoholism2 (34)2021 New Day in Medicine p 226-228
31. Turaev F. S., Ilyasov A. S. "STRUCTURAL AND FUNCTIONAL ELEMENTS OF SPHINCTERS OF THE GASTROINTESTINAL TRACT OF HUMAN AND ANIMALS " 2022 EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE p 54-61