

was performed on a densitometer «LUNAR 8743» from GE Medical Systems Lunar (USA). Diagnosis of OP and osteopenia (ARF) was conducted using WHO diagnostic criteria (1994), based on the quantitative evaluation of BMD, as the determining factor of bone strength. The diagnosis of OP in men 50 years and older was established in the presence of a T-test <-2.5, ARF at T-criteria from -1.0 to -2.5, the norm is the value of the T-test from -1 to +1. For men younger than 50 years, the use of the Z-criterion is necessary, since the diagnosis of OP in this group can not be established solely on the basis of the IPC data. The Z-criterion above -2.0 was regarded as expected indicators for this age group, and the Z-criterion -2.0 or less indicates the presence of bone loss [2]. The statistical analysis was carried out using the STATISTICA 6.1 software package. Differences were considered significant at $p < 0.05$.

Results and discussion The study found that in the general group of men with COPD, low bone mass was detected in 64% of cases. OPN was diagnosed in 15 (30%) patients, OP in 17 (34%) patients. When comparing groups of patients with COPD isolated according to the categorization of the disease, a statistically significant increase in the proportion of patients with OP was established. Thus, in patients with category B, OC was diagnosed in 15.8% of cases, category C - in 30.8% of cases, category D - in 55.6% of cases. At the same time, the incidence of OP in patients with category D was significantly higher than in patients in category B ($\chi^2 = 4.787$ $p = 0.029$) and there was a tendency for an increase in the frequency of OI in patients with category C, compared with patients in category B.

Conclusion Thus, the incidence of OP and ARF in men COPD aged 45 to 65 years is high. As the category of COPD increases, there is an increase in the proportion of patients with OP, which indicates the need for monitoring the IPC for early detection of an IPC violation. This will allow individualize the treatment of this category of patients and thereby prevent the destruction of bone tissue, improve the prognosis and quality of life of patients.

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EFFECT OF PHYTOPREPARATION ON THE INTENSITY OF PEROXIDATION PROCESSES INDUCED BY THE INTRODUCTION OF CARBON TETRACHLORIDE

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Summary. Antioxidant properties of liquorice syrup have been studied on the model of toxic

hepatitis induced by carbon tetrachloride damage. The introduction of the liquorice syrup to rats contributes to the reliable decrease in the blood and in the liver of lipid hydroperoxides by 6-23%, of diene conjugates – by 9-24%, and of malonic dialdehyde by 25-30% in comparison with the rats of the control group. The application of the phytopreparation in the conditions of introduction of carbon tetrachloride of the organism of animals under experiment leads to the stabilization of the processes of peroxidation against the increase of antioxidant system activity.

Key words: liquorice syrup, carbon tetrachloride, biological membranes lipid peroxidation, products of peroxidation (lipid hydroperoxides, diene conjugates, malonic dialdehyde), antioxidant system.

Currently there is an active search of funds, increasing the stability of liver pathological effects, reinforcing its neutralizing function, promoting its functional recovery after various injuries, including poisoning by industrial poisons. Therefore, the study of opportunities to reduce toxic liver damage by carbon tetrachloride introduction of synthetic and natural antioxidants is of interest.

Materials and methods. In experimental conditions the possibility to correct free radical lipid oxidation of rats' organism membranes was studied with the introduction of the liquorice syrup. The animals were divided into 3 groups and each of them had 10 rats: the group with intact animals which were held in standard conditions of vivarium; the control group in which rats were given carbon tetrachloride during 3 days daily; the experimental group in which before the introduction of carbon tetrachloride animals had a daily oral intake of the liquorice syrup a dose of 5 ml/kg. The intensity of peroxidation processes was assessed by examining the contents of hydroperoxides lipids, diene conjugates, malonic dialdehyde and the main components of the antioxidant system, (ceruloplasmin, vitamin E) in the in the blood and in the liver of animals. The results obtained were subjected to statistical analysis with calculation of parametric criteria Student.

It was found out that in the blood and in the liver of experimental animals a daily the introduction of carbon tetrachloride during 3 days contributes to the increase of lipid hydroperoxides level (by 24 – 43%), of diene conjugate (by 19 – 47%), and of malonic dialdehyde (by 61 – 81%) against the decrease of antioxidant system activity in the blood of intact animals. The introduction of the liquorice syrup to rats contributes to the reliable decrease in the blood and in the liver of lipid hydroperoxides by 6-23%, of diene conjugates – by 9-24%, and of malonic dialdehyde by 25-30% in comparison with the rats of the control group. While analyzing the effect of the phytopreparation on the activity of the components of antioxidant system it was shown that the level of ceruloplasmin in the blood and in the liver of animals was reliably higher by 10-47%, of vitamin E by 13-42% in comparison with the same parameters of the rats of the control group.

So, the application of the liquorice syrup in the conditions of introduction of carbon tetrachloride of the organism of animals under experiment leads to the stabilization of the processes of peroxidation against the increase of antioxidant system activity.

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MODERN IDEAS OF AMBLYOPIA

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Abstract The leading role in formation of different types of amblyopia belongs to a touch deprivation owing to violation of refraction, decrease in transparency of optical environments or squint with violation of binocular sight during formation of visual system. The deprivation leads to violation of development of the visual analyzer at all levels – from a retina to the visual centers of a cerebral cortex. Today in literature discussion of questions of level and mechanisms of the violations developing in visual system under the influence of a deprivation continues.

Key words: amblyopia, vision acuity, deprivation.

Amblyopia (from Greek *amblyos* - stupid, *opsis* - vision) is for the first time described by Le Cat

in 1713. E.S. Avetisov (1962) has given the following definition: "It is necessary to understand forms of decrease in sight various by origin which reason functional frustration of the visual analyzer mainly are as an amblyopia". Amblyopia – rather frequent pathology of the visual analyzer. According to E.S. Avetisov (1968), it is registered at 1-2% of all population. According to James F. Vender and Janis A. Gault (2005), the prevalence of amblyopia in the USA is 2-5%. Amblyopia arises and observed, mainly, at children's age. A.N. Dobromyslov, V.G. Maymulov (1982) diagnosed it for 1,07-6% of children of preschool and school age. According to many ophthalmologists the amblyopia at preschool children wins first place in structure of children's eye pathology, and at school students – the second, having conceded the first place of shortsightedness. In clinical practice ophthalmologists face problem of amblyopia at patients of all age [1]. By means of an optical coherent tomography at amblyopia violation of structure of pigmentary epithelium of retina, a thickening of a horiocapillar layer is revealed, involuntional changes in type of thinning of layer of photoreceptors and a pigmentary epithelium are noted [2]. The reliable increase in thickness of the central area of retina at all types of amblyopia [3] which was more expressed at disbinocular amblyopia is defined. At refraction amblyopia, since average degree, reliable increase in thickness of the central area of retina is observed [2]. At the same time Markosyan G. et al. have revealed smoothing of retina relief in the field of fovea at congenital shortsightedness in comparison with acquired at identical values of retina volume [4]. Undoubtedly, the revealed features of the central area have certain, still insufficiently studied value in development and a current of amblyopia and are useful to diagnostics in clinical practice. Electrophysiological methods, are widely applied in objectification of a functional condition of the visual analyzer at amblyopia [5]. Researches of bioelectric activity of retina at amblyopia by means of ERG demonstrated decrease in function of photoreceptors and neurons of macular area (decrease in amplitude and - and in - waves of local ERG on a red incentive), at the same time the bioelectric activity of peripheral departments of retina is close to norm [6]. Electrophosphene, being method of express diagnostics of functional condition of the visual analyzer, I have allowed to define deterioration in indicators of electric sensitivity threshold of retina and electrolability of optic nerve at amblyopia in children [7]. Healthy children have a character of the visual caused potential which adequately reflects neurophysiological function of the visual analyzer, is formed up to 3 months, from a year to 3 years of his characteristic come nearer, and in 7 years coincide with indicators in adults. Complex use of techniques of assessment of the visual caused potentials allows to define degree and level of neurotouch defeat of vision acuity [8]. Data of literature on research ZVP demonstrate that functional violations of processing of touch information affect high-frequency channels at an anizometric and disbinocular amblyopia and low-frequency channels at refraction and obskuration amblyopia. As a result of pilot studies neurophysiologists have found morphological and functional violations in the visual centers of a brain – external cranked bodies and striar bark where the atrophy and functional insolvency of the neurons receiving boost from deprivation eye