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THE FORENSIC VALUE OF THE CONCENTRATIONS OF ETHANOL AND ACETALDEHYDE IN THE BLOOD IN THE EXAMINATION OF ACUTE ALCOHOLIC POISONING

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Introduction. In forensic practice, one of the actual problems is the examination of acute alcohol poisoning. The complexity of this type of expertise is related to the identification and evaluation of a significant number of diagnostic features, including the concentration ratio of ethanol in the blood. It is known that during the metabolism ethanol is transformed into a highly toxic metabolic, acetaldehyde (ACO), which exceeds the toxicity of ethanol in more than 100 times. Currently in forensic practice, the concentration of ACO is not defined, despite the fact that the role of ACO in thanatogenesis in death from alcohol poisoning is well known.

Aim. To determine the feasibility of using the indicator of the concentration of acetaldehyde in the blood as an additional diagnostic criterion in examination of the acute alcohol poisoning.

Materials and methods. The research is based on 96 corpses of males aged 21 to 66 years, among which, 50 cases of death from acute alcohol poisoning (main group), and 46 cases of mechanical trauma (control group), mechanical asphyxia, and diseases of the cardiovascular system (sudden death). In the course of the forensic autopsy, using a dry syringe without a needle, the blood was collected from the femoral vein in an amount of 15 ml and was placed in a sterile penicillin vials, after which the objects were sent to the forensic toxicological laboratory, where the concentration of ethanol and ACO in the blood was determined by gas-liquid chromatography.

Results. As a result, it has been established that in the main group (acute alcohol poisoning) the concentration of ethanol in the blood was on average 5.5 ‰ which corresponded to the lethal level of alcohol intoxication, and the concentration of ACO was 0.0247 ‰ which was higher than the normal physiological value in more than 20 times. In cases of mechanical trauma the concentration of ethanol in the blood averaged 2.51 ‰ which corresponded to the level of strong alcoholic intoxication, and the concentration of ACO amounted to 0.008 ‰ which was higher than the normal physiological value in about 8 times. In cases of mechanical asphyxia the concentration of ethanol in the blood averaged 2.10 ‰ which corresponded to the level of intoxication of an average degree, and the concentration of ACO was 0.0155 ‰ which exceeded the norm by 15 times. In cases of sudden death, the concentration of ethanol in blood was 1.08 ‰ which corresponded to the level of slight intoxication, and the concentration of ACO reached 0.009 ‰ which was higher than the normal physiological value in 9 times.

In cases where the concentration of ethanol was less than 0.4 ‰ the concentration of ACO averaged 0.0007 ‰ which was within the physiological norm. In cases where the concentration of ethanol corresponded to slight degree of alcoholic intoxication (0.5 to 1.5 ‰) the concentration of ACO averaged 0.0054 ‰ which exceeded the norm by more than 5 times. In cases where the concentration of ethanol was consistent with moderate alcohol intoxication (1.5 to 2.5 ‰) the concentration of ACO averaged 0.011 ‰ which is more than 10 times above the norm. In cases where the concentration of ethanol corresponded to strong alcoholic intoxication (2.5 to 3.0 ‰) the concentration of ACO averaged 0.0183 ‰ which exceeded the norm by more than 18 times. In cases where the concentration of ethanol was consistent with severe poisoning (3.0 and 5.0 ‰) the concentration of ACO

averaged 0,0213 ‰ which exceeded the norm by more than 20 times. In cases where the concentration of ethanol exceeded 5,0 ‰ which corresponded to the level of lethal concentrations, the level of ACO averaged 0.028 ‰ which is almost 30 times higher than the physiological norm.

Conclusions. Thus, as a result of our work there have been received a direct correlation of the ratios of the concentrations of ethanol and acetaldehyde in the blood during acute alcohol intoxication, which indicates that the concentrations of acetaldehyde in the blood can be used as an additional diagnostic criterion for forensic examination of acute alcohol poisoning.

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CLINICAL AND MORPHOLOGICAL CHARACTERISTIC OF TUMORS OF THE CENTRAL NERVOUS SYSTEM. RESULTS OF ANALYSIS CASE HISTORIES AND BIOPSY MATERIAL OF KHARKIV REGIONAL HOSPITAL FOR THE PERIOD FROM 2010 TO 2014 YEARS

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Introduction. There are two types of tumors of the central nervous system (CNS): primary CNS tumors and secondary (metastatic) tumors. The primary brain and spinal cord tumors are also divided into two types: benign and malignant. The biology of primary CNS neoplasms is totally different from biology of other types of tumors. So nowadays it's very important to know and understand morphological characteristics of primary CNS tumors. The World Health Organization in its new classification of CNS tumors, published in 2007 also focuses on the histological types of these tumors, because the knowing of these types can increase treatment efficiency for patients with such a problem.

The goal of this work is to research the histological types of CNS tumors.

Materials and methods. The research is based on 343 case histories of patients with tumors of the central nervous system and their biopsies in the period from 2010 to 2014 years. The statistical data was processed with Microsoft Excel 2007.

Results. Among the 343 cases of CNS tumors the study found 304 (88,7%) primary neoplasms of the CNS, 36(10,5%) metastatic tumors and 3(0,8%) tumors could not be distinguish by the routine microscopy. Among primary tumors the tumors of neuroepithelial tissue were counted in 172 cases (56,5%), tumors of cranial and paraspinal nerves in 24 cases (7,8%) , tumors of meninges in 100 cases (32,8%) and angioreticulomas in 9 cases (2,9%). Among primary neoplasms the benign tumors were counted in 119(34,7%) cases and malignant tumors in 184 (65,3%) cases.

Conclusions. 1. Primary tumors of the central nervous system occur much more often than secondary tumors in this location. 2. In the structure of primary CNS tumors predominate tumors of neuroepithelial tissue (56,5%).

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THE ANALYSIS OF THE MEDICAL STUDENTS' ANXIETY LEVEL WITH THE CONDITION OF HYPODYNAMY

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Introduction. Education at the University includes the period of social and psychological adaptation of youth in the condition of information and analytical and emotional stress complete with hypodynamy. The lack of physical activity is one of the