

substantially devoid of issues. Thanks to this manipulation millions of lives were saved, including cases that took place during wars and major natural disasters. However, the first significant step in the study of blood transfusion was made only in the XVII century, when the English physician William Harvey discovered blood circulation in human body. As the same time there was the first attempt to transfusion blood. It aroused interest of scientists and physicians and they started working in this direction actively. In the Soviet Union, practice of blood transfusion only became widely used in the 20s of the last century. The first science-based blood transfusion was made on June 20, 1919 by the Soviet surgeon VN Shamova, who was the head of the Department of Surgery of Kharkov Medical Institute. Development of the issues related to the new trend in medical practice become one of the major themes in the work of this outstanding scientist.

Results. The study began from research which provided the opportunity to get standard determining serum for determining izoagglutinatsionnyh groups, without which it was impossible to continue the development of the blood transfusion service. Much time the scholar devoted to immunobiological aspects of the blood donation overflow developing the questions related to "universal donor". Special studies showed that blood of a corpse does not become infected for many hours and due to this fact it was proposed to cadaveric blood transfusions (hereinafter fibrinolizirovannuyu). Advocating the method of blood transfusion, V.N.Shamov spoke at the Congress of Surgeons (1928, 1930) reports on results of research and their application in practice. On the initiative of V.N.Shamova Ukrainian Institute of Hematology and Blood Transfusion was founded in Kharkiv (1930) and it became an essential contribution to the development of this work. During the Great Patriotic War V.N.Shamov was deputy chief surgeon of the Red Army specialized in blood transfusions. He paid a lot of effort and attention to the establishment of all parts of the service, including harvesting, storage and transportation of blood. It was established that after treatment in hospitals 72.3% of patients back into service. In many ways, it contributed to a well-organized blood transfusion service. Head of the Main Military Medical Directorate of the Red Army E.I.Smimov wrote that "these results are unfading monument of selfless service of health workers to the homeland during the war, among which the most prominent place belongs to V.N.Shamov."

Conclusion. The case, which V.N.Shamov devoted his life continues to serve the community till the present day.

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DIAGNOSTIC VALUE OF MORPHOLOGICAL SIGNS IN FORENSIC MEDICAL EXAMINATION ON CAUSES OF DEATH FROM DROWNING

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Introduction: Recently the main direction in improvement of the forensic diagnostics of the death cause has become the research of maximum number of diagnostic features that are found in every kind of death. Drowning is one of the most common and difficult to diagnose types of mechanical asphyxia. According to the WHO, the frequency of drowning is 1.1-1.3 cases per 10,000 people, with mainly young people, which are sufficient grounds for considering this type of death a real social issue. Diagnostics of the cause of death from drowning is one of the topical problems of forensic science and practice. However, the existence of a large number of diagnostic features and using of modern instruments and

techniques are leaving it impossible to estimate the diagnostic value of each feature which leads to subjectivity of expert's conclusions about the cause of death.

Aim: To improve the diagnostics of the death cause from drowning by means of mathematical justification of expert's conclusion on the cause of death.

Tasks: To measure frequency of external and internal signs of death drowning; to determine the significance coefficient of each feature.

Material and methods: Morphological, macro- and microscopic, toxicological, statistical, mathematical, applying Bayes' postulate. Male and female corpses of different age groups which died from drowning.

Results: It was found during the study that the majority of deaths from drowning is composed by middle aged employable men (81,1%). The most frequently encountered features are: Paltauf's hemorrhages (98%), liquid blood (98%), liquid in pleural cavity (90%), lungs volume increase (89%), hyperemia of internal organs (89%), subepicardial hemorrhages (84%), water in abdominal cavity (77%), subpleural hemorrhages (76%). By means of statistical probabilities of drowning signs it is possible to establish the conclusions veracity about the cause of death, using suggested table of diagnostic coefficients. If the sum of statistical probability of diagnostic features is 95% or higher than the expert's conclusion on the death cause should be considered as reliable, if coefficients' sum is 75-95% then experts' conclusions are possible, when the same sum is below 75% - doubtful.

Conclusion: Using of the proposed method for determining the reliability of expert's conclusions will provide an opportunity to increase the objectivity and accuracy of forensic medical diagnosis of death due to drowning.

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FORENSIC-MEDICAL EXAMINATION CASES OF SUDDEN CARDIAC DEATH DURING SPORTS

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Introduction: Cases of sudden cardiac death (SCD), which arise in sporting activities, are not very common in forensic-medical practice, but at the same time they are very difficult to diagnosis. This is explained by the absence of any medical records, circumstances of death are unknown and morphological changes of heart are nonspecific.

Aim: the improvement of diagnostic SCD in athletes.

Materials and methods: analysis of clinical cases, analysis of published sources.

Results. SCD occurs directly during physical activities or in the first hour after the indications of cardiovascular disorders arose. All cases of this sudden death are grouped into the such categories: 1) "shaking heart" syndrome, when a sudden and powerful blow to the chest causes cardiac arrhythmia; 2) the death of young athletes (under 30 years), which is associated with hereditary heart disease; 3) the death due to a heart attack, which is associated with acute myocardial ischemia. The last category is the main cause of death in athletes over 30 years, and it occurs often during intense dynamic loading. Analysis of the literature showed that the basic mechanisms of SCD associated with restructuring of the ventricular myocardium and asystole, electromechanical dissociation cardiac structures, cardiogenic shock, acute left ventricular or right ventricular failure. In our opinion, the analysis of forensic-medical histological examination is crucial in the formulation of the