

Table 1. – Clinical-functional parameters of the oral cavity in workers at the manufacture of SDC and in the persons of control group (M ± m)

Studied parameters	Physiological norm	Group of workers		Reliability
		studied	control	
Hygienic index, score	0–1	5.5 ± 0.6	5.4 ± 0.3	> 0.05
Enamel acid-resisting enamel, %	40	65.6 ± 2.5	46.3 ± 1.9	< 0.001
Dense tissue electroconductivity of the teeth, μ A teeth, mKA	0	3.0 ± 0.2	1.5 ± 0.07	< 0.01
Shiller-Pisarev test, %	0	77.3 ± 2.2	45.4 ± 1.5	< 0.001
Kulajenko test with Index of peripheral circulation	50–60	24.1 ± 1.3	47.1 ± 1.7	< 0.001
Index of peripheral circulation, %	80–100	21.2 ± 0.7	62.1 ± 1.4	< 0.001

Thus, having analyzed the own and literary data it is possible to say, that under the conditions of manufacture of synthetic detergents and cleaners in the workers there is observed decrease of the acid-resisting of the enamel, increase in electroconductivity of the dense tissue of the teeth, reduction of the gingival capillary stability and index of parodontium

peripheral circulation which, apparently, precede to development of dental caries and parodontium diseases among the workers. Therefore these disorders can serve as integrated parameters of negative influence of production factors of the making of SDC on the health and condition of the oral cavity of the workers.

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Characteristic lesions of liver in cases of car accident trauma with lethal outcome

Abstract: Morphologic peculiarities of close lesions of liver are various, and that is linked with the variety of formation conditions. Though, in spite of the variety of morphology of liver lesions, some types of the lesions and their combinations appear only in specific kinds of automobile traumas.

Keywords: close lesions of liver, automobile trauma, morphological peculiarities.

Topicality. Automobile trauma takes a leading place in the structure of mechanical lesions. According to statistical data mortality of traffic accidents (TA) occupies the third place after cardiovascular diseases and new formations [2].

Every year about 55 mln. car accidents happen in the world and cause the death of 1.2 mln. people and 8 mln. get trauma. The economic loss of TA in some countries is considered to be 2% and more of the foreign exchange earnings [5].

Close trauma of liver made by obtuse objects drew surgeons' attention for a long time because of difficult diagnosis, severe progress and high lethality rate. They worked out the problems of diagnosis, morphology of lesions, mechanisms of

damage appearance, and the methods of surgical treatment. Different from surgeons forensic specialists paid unjustified little attention to close trauma of liver made by obtuse objects. Those few works of forensic character published in literature, revealed only some features of that problem [4]. Even in authorized dissertations dedicated to various kinds of traffic trauma [3, 4] the lesions of liver were paid very little attention. The opinion on problem of the frequency of close trauma of liver is not unequivocal in the literature, dependently on the time and source of the statistic data.

During the last decade the number of the cases with the close trauma of liver started rising, and, in the opinion of some

authors, that is directly linked with fast development of various kinds of transport, which serve to be the main reason of severe traumas [1].

The specificity of the study of close trauma made by obtuse objects in forensic medicine is multipolar researches. In practice all lesions appearing in certain kinds of obtuse trauma such as traffic, industrial, falling from height and others are studied simultaneously. Though the necessity of the further perfection of forensic expertise demands more detailed and profound study of the character and peculiarities of close lesions of certain organs including liver [1; 4; 5].

Thus, the study of the peculiarities of lesions of liver caused by automobile trauma is actual problem in medicine and particularly forensic medicine.

The aim of the research: is to study the peculiarities of close lesions of liver in car accident traumas with lethal outcome.

The materials and methods of the research: The material for the research were 144 forensic expertise conclusions of corpses with body injuries got in car accidents from 2004 to 2013 performed in the center of Tashkent city bureau of FE.

The analysis of forensic expertise conclusions showed that the frequency of getting close trauma of liver is much higher among men — 106 (73.6%) cases, than among women — 38 (26.4%). Among them there were 97 (67.4%) pedestrians, 11 (7.6%) passengers, 36 (25%) drivers. In 15 cases the drivers had alcoholic intoxication. In 19 cases pedestrians had alcoholic intoxication.

Most often close trauma of liver were met in the groups from 20 to 40 years old (57.6%), i.e. the most active and workable age. Among children that kind of trauma was observed in 9.7% cases.

Combined traumas of head, thoracic cage, inner organs with fractures of limbs were observed in the absolute majority of the cases (99.3%).

Isolated lesion of liver was noted in 1 case.

Besides, we observed combined lesions of organs such as lesions of spleen (51 cases), kidneys (48 cases), small and large intestines (8 cases), bladder (3 cases), pancreas (11 cases), stomach (5 cases), lungs (87 cases) and heart (14 cases).

The greatest amount of car accidents was observed in spring season.

The results of the research: in autopsies we revealed that in 50% cases location of close trauma of liver caused by direct impact, raptures and chinks were on visceral surface; in cases of commotion and result of "anti-struck" — 25% superior surface.

Arch-like raptures of the capsule and tissue of liver we observed in 4.2% cases with the liver drift to the side of motion of the wheel which pressed the body of a victim. The protuberant surface of the rapture indicated the direction of the wheel rolling across the body of a victim lying on his back.

The most characteristic lesion of liver in car accidents is rapture (70.8%). The raptures had linear, arch, winding, spindle-shaped, tree-like, radial and other forms with direction mostly

conditioned by the direction of object motion. The length of the raptures varied from 1.5 cm. to complete separation of an organ.

When the impact was done by an automobile from front side backward the raptures mostly located on diaphragmal surface of the right lobule of liver. A strong impact in 14.6% (21 cases) formed several raptures (from 2 to 5) directed along the impact line of the object causing trauma up to 9 cm depth. For example, a victim of a car accident who died because of strong impact from the frontal side backward had the following lesions of liver: 5 raptures with linear and arch shape on the diaphragmal surface of the right lobule sized from 1.5 x 1 cm. to 7 x 0.2 cm. on the border of the IV, V and VIII segments of liver, directed backward and a little bit to the left. The sixth rapture sized 7.5 x 0.2 cm. located on the right surface of the right lobule with smashed parenchyma edges inside to 0.5 cm.; two foci of sub-capsule hemorrhages 5 x 3.5 cm. and 4 x 3 cm. on the visceral surface of the right lobule in the area of renal fossa, corresponding to the VI and VII segments close to ligament attachment.

The lesions of liver caused by the forward impact are similar to the lesions from the impact to the anterior surface of the body, but with different direction of the raptures. The raptures of the right lobule (also prevalingly diaphragmal surface) last up to 9 cm., in 12.6% cases pass from the diaphragmal surface of the lobule through the dorsal edge to the visceral surface and penetrate inside to 5 cm.

At the moment of the impact in both forward and backward directions there is formation of remote stellate raptures of the capsule and parenchyma, and hemorrhages and raptures deep inside the organ (central).

Damages of hepatic ligaments are very characteristic for the morphology of liver trauma caused by car accident. A strong impact to a body made by an obtuse object causes sudden drift of liver and over extension of the ligaments, in the process of which sub-capsule hemorrhages and rapture of the ligaments can occur. These kinds of traumas we observed in 10 victims (6.9%). A part of liver lesions with the aforesaid mechanism appears on the side opposite to the place of external impact effect on the liver because of stroke to vertebral column or a costal arch (usually moderate hemorrhages).

Thus, the morphologic peculiarities of these lesions are very diverse, and it is linked with the variety of the conditions they are formed in. though, in spite of the variety of the morphology of liver lesions, certain lesions and their combinations appear only in specific kinds of car accident traumas.

Conclusion: a forensic expert, after definition of the type of traumatic impact based on the character of liver lesions, can suppose the possibility of the cause of these traumas in certain conditions, surely taking into account other morphologic data, achieved in the expertise of a corpse. Unconditionally, a dogmatic approach to the definition of the type of traumatic impact according to the character of hepatic lesion is not acceptable. A certain tolerance can be accepted, as the mechanisms of hepatic lesions' formation are complicated enough and there are possible deviations in the process of

lesion characteristic features formation, which is dependent on many factors such as conditions of traumatic impact, power

of the impact vary variable if made by obtuse objects with limited and unlimited surfaces and others.

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Comparative characteristic of fetometrycal indicators of cerebrospinal fluid system of the fetal brain in the second trimester of gestation

Abstract: It was conducted a comparative characteristic of regional fetometrycal indicators of CSF system of the fetal brain in the second trimester of pregnancy of women living in the Chernivtsy region with similar data of Great Britain and Kharkov (Ukraine).

Keywords: fetus, cerebrospinal fluid system, fetometry.

Introduction. The most important problem of obstetric service is improving of quality and effectiveness of prenatal diagnostics of fetal growth and development. One of the key components of this diagnostics is ultrasound photometry — measuring of various anatomical structures of the fetus, which is a compulsory component of the ultrasound examination in obstetrics [1, 15–16]. Comparison of fetometrycal findings with standard data of specific region allows to determine conformity of the size of fetus and its gestational age, estimate the rate of growth and clarify the pregnancy term [3, 16–17].

In modern literature on ultrasound diagnostic in obstetrics are described numerous of fetometrycal indicators which are developed by domestic and foreign authors for their populations using Percentile approach [2, 86–87].

Analysis of literature shows that differences between the nomograms of fetometrycal ultrasound indicators may be associated with ethnic features of anthropometric indices [5, 183–184].

In Ukraine as a whole and in its separate regions fetometrycal regional standards are not available, and using of foreign authors normohram often leads to a large number of false positives and false negative results of delay of intrauterine development. Therefore, the actual problem is the development of regional standards of ultrasound fetometry, because their use will ensure a correct assessment of fetal growth dynamics and increase the effectiveness of prenatal diagnostic of congenital anomalies [4, 113–115].

Purpose — to provide a comparative analysis of fetometrycal indicators of Chernivtsy region fetuses in the second trimester of gestation with those of other regions.

Materials and Methods. Studied 164 results of the ultrasound examination of pregnant women in the second trimester of physiological gestation who are living in Chernivtsy region. Ultrasound examination was performed on the base of Medical Genetic Center (MGC) of Chernivtsy Regional Diagnostic Center (ChRDC).

Retrospective analysis of 2004–2008 years was conducted by studying of ultrasound examination conclusions of pregnant women in different periods of gestation. Estimated fetometrycal normal size of circumventricular system. A comparative analysis of the size of the anterior and posterior horns, the body of lateral ventricles, a large cistern and subarachnoid space of the brain was made with the same data of other regions.

There were used general statistical methods for biomedical research.

Discussion of the research results.

Weight and growth parameters of newborns and, consequently, fetuses in different countries and even in different regions of the same country, differ significantly. Genetic, ethnic, natural — this is not the whole list of factors that affect on the growth, weight and rate of intrauterine fetus development [5, 183–184].

Therefore, different regions have their own peculiarities of fetometrycal indicators.