



## STUDY OF THE MORPHOLOGICAL CONDITION OF THE LIVER OF THE CHILD BORN IN THE CONDITIONS OF CHRONIC TOXIC HEPATITIS

Nazarova Malokhat Berdiboevna  
Yusupova Umidajon Ulug'bekovna  
Urgench branch of the Tashkent Medical Academy.

### Annotation

Experiments have shown that chronic toxic hepatitis in the mother adversely affects the processes of postnatal growth, development and formation in the liver blood vessels and tissues of the offspring born from it. The pathomorphological changes that occur in the tissues and blood vessels of the azo lead to the development of processes that lag behind the development and formation in the later stages of postnatal development. These processes indicate the need to develop rational, science-based treatment and prevention measures in the treatment of the offspring born with existing pathology in the mother, the prevention of their diseases.

### Topicality.

The problem of preserving maternal health and offspring to this day remains the leading one in the policy of our state. The problem of the influence of various unfavorable factors on the offspring carries not only medical, but also enormous social significance. This is due to the fact that in recent decades, there has been a demographic crisis all over the world - the birth rate is decreasing and, despite the development of technologies in medicine, there is a high mortality rate of newborns. This problem can be attributed to the fact that the number of women of fertile age with various extragenital diseases has increased, among which diseases of the hepatobiliary system, including chronic hepatitis, which are one of the important causes of maternal and perinatal pathology, occupy a special place. Scientists are also sounding the alarm about the action of many drugs, adverse environmental factors, stress, viral and infectious diseases that have embryotoxic, fetotoxic and teratogenic effects, depending on which periods of embryo formation they act and how long they affect [1, 4, 5,7, 10, 12].

**The aim of the study** was to study the effect of chronic toxic hepatitis in the mother on postnatal liver morphogenesis in the offspring of experimental animals.

**Materials and methods of research:** The experiments were carried out on white outbred Wistar rats. The animals were divided into 2 groups of 30 animals each: group 1 (control) - intact animals, group 2 - rats, which were injected weekly for 6 weeks with heliotrin at the rate of 0 to create a model of chronic toxic hepatitis in rats, 5 mg / 100 g of mass. 10 days after the last injection, males were added to them and to the females of



the control group. Rats born and fed by mothers with chronic toxic hepatitis on the 3rd, 7th and 21st and 30th days of postnatal development were decapitated and pieces of liver tissue were taken for histological examination. The material was subjected to general morphometric, morphometric and electron microscopic studies. In order to study the intraorgan vessels of the liver, a solution of black ink was injected intracardiacally according to the original method of M.A. Kolesov through the left ventricle of the heart. Vascular lightening was performed according to the method of A.G. Malygin.

**Results.** On the 3rd-7th day of life of postnatal development of rat pups, born and fed by mothers with chronic toxic hepatitis, the following picture was observed in the vascular tissue structures of the liver: in the liver microstructure of newborn rat pups (3-7 days), hepatocytes were located loosely and randomly, dividing wide and full-blooded sinusoidal hemocapillaries. In some hepatocytes, the phenomena of hydropic dystrophy were noted, pycnosis and lysis of nuclei were observed in some cells. Morphometric studies showed that the size of hepatocytes increased ( $18.5 + 0.8$ ), compared with the indicators of the control group of animals (in the control  $12.0 + 0.4$ ). The number of binucleated liver cells is relatively higher,  $2.7 + 0.3$  (in the control,  $1.2 + 0.04$ ). Hepatic lobules and beams are poorly constructed. At electron microscopic examination, the cytoplasm of hepatic cells was not grained, the nuclei of many hepatocytes had an oval shape. Mitochondria are abundant, with an electron-dense matrix. In some places in the interlobular connective tissue, infiltration and expansion of sinusoidal hemocapillaries were detected. After 21 days of postnatal development, the animals of the experimental group showed a slight increase in the severity of the pathomorphological changes described above. In some places, against the background of a distinct beam-lobular structure of the liver, places with discompletion of the liver parenchyma were revealed, liver cells were located randomly. Mononuclear cell infiltration was observed in the interlobular connective tissue. Electron microscopically, the nuclei of hepatocytes are round, often oval in shape with two or three nucleoli located closer to the nuclear membrane. Kupffer cells are single. The endoplasmic reticulum is often represented by vacuoles, vesicles of various sizes.

Disse space is slightly expanded in places. In some centers of the lobules, a decrease in the number of hepatocytes is noted, there is a slight increase in granulomas and small cell nodules adjacent to the portal tracts. Venous vessels of the liver are dilated in places, full-blooded. In the animals of the control group, a distinct beam-lobular structure of the liver was noted at this time. When studying animals in more distant periods of postnatal development (on the 30th day), the experimental group of animals showed significant individual fluctuations in the severity of



pathomorphological changes in the liver and the nature of age dynamics. While in some rat pups these pathomorphological changes gradually subsided somewhat with age, in other animals they still persisted, as did some edema of the portal tracts. In some places, hepatocytes with destructively dystrophic changes in the nucleus and cytoplasm of the liver were found. The parenchyma was divided by thin layers. The interlobular connective tissue forms the stroma, in which the vessels and bile ducts are located, the bald and lobular structure is preserved. Vessels with moderate blood filling. Parenchymal cells are mononuclear in 70%, and in 30% cells have 2 nuclei.

Liver of rat pups at 30 days of postnatal life. Electron microscopic endothelial stellate reticulum was enlarged and abundant. In animals of the control group, at this time, the liver microstructure acquired a typical lobular structure. Portal tracts, represented by loose fibrous connective tissue, were clearly identified. The vascular pattern of the liver was also consistent with that in adult intact rats.

### **Conclusions:**

1. Chronic toxic damage to the mother's liver negatively affects the processes of postnatal growth, development and formation of tissue structures of the offspring liver.
2. Pathomorphological changes in the vascular-tissue structures of the offspring liver, subsequently lead to a delay in the processes of postnatal development and formation of the liver and the organ system of the offspring as a whole.
3. Mothers with chronic pathology give birth to offspring with impaired "start of health", all this indicates the need to develop scientifically based therapeutic and preventive measures in order to prevent pathology in children born to mothers with chronic liver pathology.

### **References:**

1. Ramazonovich, I. S., Islamov, S. E., & Negmatullaevna, M. N. ASSESSMENT OF THE NATURE OF THE JAW INJURY. *trauma*, 7, 10.
2. Бобомуратов, Т. А., & Юсупова, У. У. (2023). Взаимообусловленность Показателей Гемостаза И Тяжести Течения Пневмонии У Детей Из Южной Зоны Приаралья. *AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI*, 2(2), 28-34.
3. Bobomuratov, T. A. ., & Yusupova, U. U. . (2023). Identification of Clinical and Laboratory Changes in Acute Pneumonia in Young Children Living in an Unfavorable Ecological Environment (In Khorezm Region). *Journal of Intellectual Property and Human Rights*, 2(1), 14–20. Retrieved from <http://journals.academiczone.net/index.php/jiphr/article/view/550>