

Morphometric Characteristics of the Liver during Pregnancy in Experimental Chronic Renal Failure

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Abstract: Study of morphological and morphometric changes of the liver of pregnant white rats after chronic renal failure. A study of normal morphological and morphometric parameters of the liver of pregnant white rats. Study of the anatomical parameters of the liver of purebred rats in pregnancy and its reactive changes after experimental chronic renal failure Comparison of pregnancy-related histo-topographic features of the liver of purebred rats in experimental chronic renal failure with parameters of healthy rats. Comparative classification of morphometric changes in the liver of pregnant rats after correction with Juyzar waters in experimental chronic renal failure.

Keywords: renal failure, structural changes in the kidney, morphological and physiological analysis of their fetus.

Introduction. The treatment of liver pathologies in chronic renal failure observed during pregnancy and the prevention of their consequences remains a medical and social problem worldwide. Despite the development of methods for the prevention, diagnosis and treatment of liver diseases, mortality rates from them occupy leading places. Currently, in our country, special attention is paid to improving the quality of social protection and the health care system, diagnosis and treatment of chronic liver diseases. We studied the morphological and morphometric parameters of the liver of pregnant white rats.

I'll give you an example of what was done before the experiment. The use of a combination of zidovudine, lamivudine and ritonavir in high doses in pregnant rats was associated with morphological and physiological changes in the liver and kidneys of the mother. On the other hand, during the experiment, the absence of changes in fetal organs was studied. [4,5].

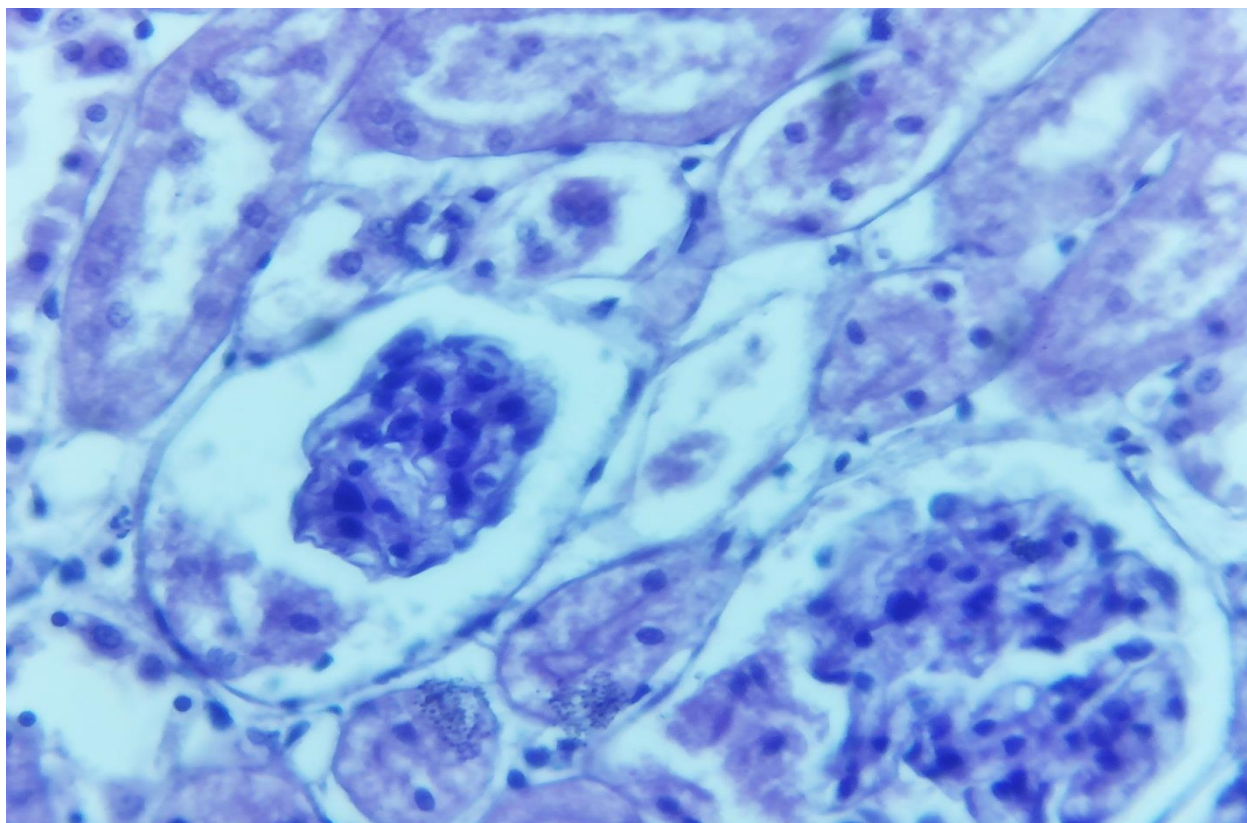
(Morphological and physiological analysis of the liver and kidneys of pregnant rats and their fetuses treated with a combination of zidovudine, lamivudine and ritonavir throughout pregnancy (Adriana Wagner -2018).

A study was conducted that revealed a significant correlation between high consumption of fatty foods by white rats and structural changes in the kidneys, such as a decrease in glomerular density, deformities, significant expansion of renal vessels and tubules, necrosis and atrophy of the glomeruli and thickening of the basement membrane. (Mohammed Eyup Altunkainak, Elvan Ozbek, Berrin Zuhail Altunkainak, Ismail Jan, Deniz Unal and Bunyami Unal-2020).

Direct injection of embryonic cells provides a quick tool for epithelial differentiation and tubulogenesis for the development of the necessary stages, including the formation of a complex of compounds and the assembly of the basement membrane. In addition, there are transplantation methods that allow us to study kidney vascularization in embryos and the effect of endothelial cells on the differentiation of embryonic cells. (Steinhardt, Brooke M. -2021).

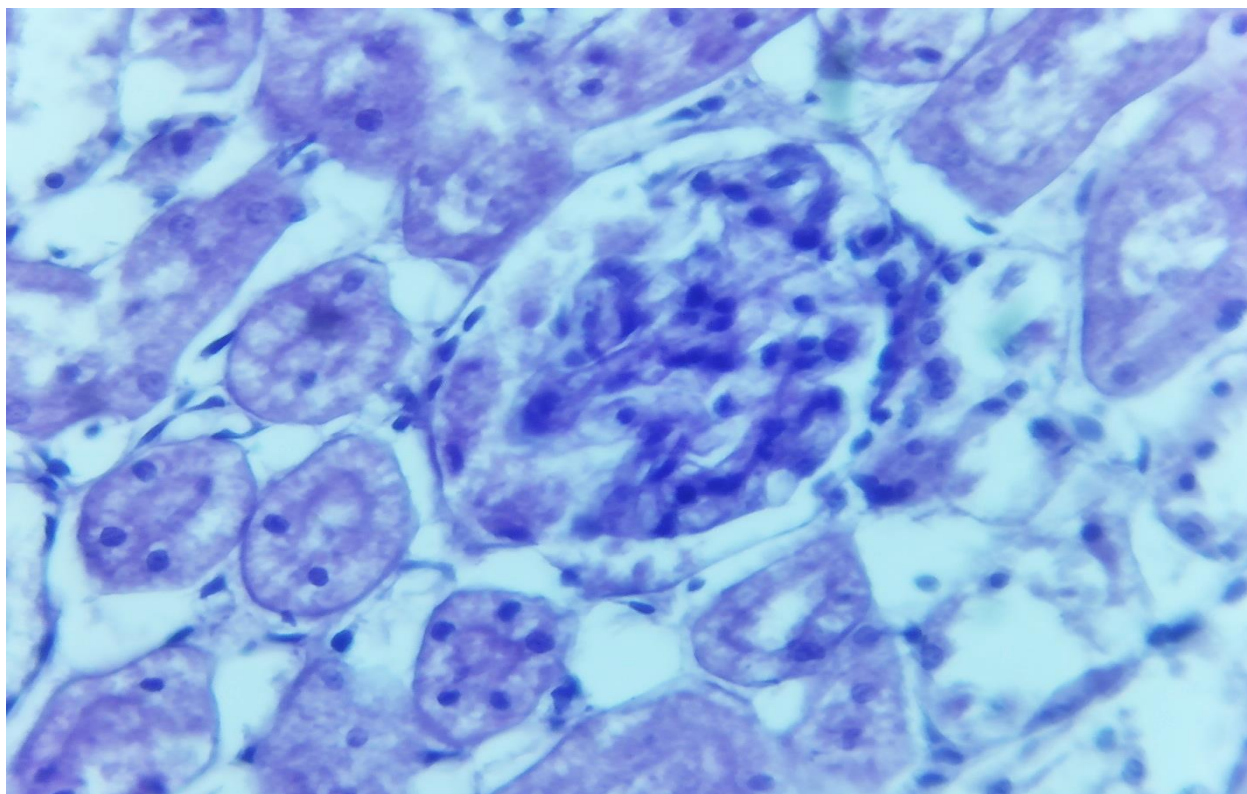
The purpose of the scientific work: to study changes in the morphological and morphometric parameters of the liver in fetuses of mongrel white rats with post-chronic renal failure.

Materials and methods. Pregnancy is 7 months, 1 month after experimental chronic renal failure, a total of 150 white mongrel rats. Histological examination of the cellular structure of the liver after experimental chronic renal failure in non-white pregnant rats. General morphological examination by staining with hematoxylin and eosin; Morphometric - examination of the size of hepatocytes; statistical methods are used. Hepatocytes are the main cells of the liver. The cellular structure of hepatocytes is cubic or polygonal. The nucleus is located in the center of the cell, round in shape - in most cases it consists of two nuclei. The cytoplasm is stained with eosinophils. Its cytoplasm is rich in endoplasmic reticulum (organelles synthesizing plasma proteins) and a large amount of granular endoplasmic reticulum (organelles synthesizing toxins, bilirubin and bile). The following surfaces are distinguished in hepatocytes. The sinusoidal surface of hepatocytes. proteins.



In chronic renal insufficiency: morphological structure of renal tissue. Coloring book G-E. EU 10x10 approx.

1. At the base of the glomeruli, there is a decrease in size, an enlarged cavity, and infiltration.
2. The Smolensky-Bauman capsule is thickened.
3. Interstitial - edema in the intermediate fiber, thickening of fibrous tissue.
4. Distal oblique - the nucleus of the epithelium of the tuberos ducts has ovoid karyolysis, without calorex. Protein dystrophy (hydropic and hyaline drip) in the cytoplasm.
5. Proximal bending - necrosis in the nucleus of the epithelium of tuberos ducts, protein hydropic dystrophy in the cytoplasm, narrowing of the cavity.



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1. At the base of the glomeruli, there is a decrease in size, an enlarged cavity, and infiltration. Smolyansky-Bauman capsule is thickened.
2. The distal bend in a healthy (compensating) working condition is the tubular duct.
3. Interstitial - swelling of the intermediate tissue, thickening of fibrous tissue.
4. Distal oblique - the nucleus of the epithelium of the tubular ducts has ovoid karyolysis, without calorex. Protein dystrophy (hydropic and hyaline drip) in the cytoplasm.
5. Proximal bending - necrosis in the nucleus of the epithelium of tubular ducts, protein hydropic dystrophy in the cytoplasm, narrowing of the cavity.

Conclusions: The results of the study of the morphology and structural changes of liver hepatocytes reveal the complex mechanisms of liver processes that occur in the body after experimental chronic renal failure, allow us to expand the level of theoretical knowledge about the organs of the digestive system. A living organism consists of about 70% water. 81 of the 92 elements found in nature are found in the human body. 1 liter of drinking water should contain the following amount of trace elements.

The development of measures to prevent pregnancy-related changes in liver structures in experimental chronic renal failure, improving the quality of effective treatment methods during the disease and when complications occur, early diagnosis of liver pathologies observed in experimental chronic renal failure, as well as the effectiveness of using Yuzar water are evaluated.

Chronic renal failure "chronic glomerulonephritis" is a consequence of all glomerulopathies: acute glomerulosclerosis, membranous and membranous proliferative glomerulonephritis. In this case, the kidneys are determined symmetrically due to the fact that they do not move from their place, the surface remains granular. In our experiment, the following changes were detected when pronounced chronic deficiency in white breed rats was deciphered and microscopic examination of changes in it was carried out. A decrease in the size of the glomeruli, sclerotic (in size) changes, the appearance of hyalinosis, an increase in the cavity, infiltration. It was found that narrowing of the supply and efferent

arterioles, impaired blood circulation between them leads to secondary damage to the balls. The capsule of Shmulyansky-Bauman is thickened. It was found that ischemic processes cause focal karyolysis, karyoresis in the nucleus of the distal and proximal epithelium of curved tubercles, protein dystrophy (hydropic and hyaline droplet) in the cytoplasm, edema of interstitial-intermediate tissue, fibrosis, causing tissue thickening. It was found that the walls of medium- and small-caliber arteries thicken, and narrowing of the blood flow pathways leads to secondary hypertension and atrophy of the renal parenchyma. Anatomical and morphological changes that occur in the liver during pregnancy were studied in rats of the same group. When the liver is macroscopic, its size is enlarged, the surface is smooth, the capsule resembles a strained nutmeg. Microscopic examination: deformation of the central venous wall (sclerotic changes), fullness and narrowing of the cavity (in size), inflammatory infiltration around. Hyperchymatous protein (hydropic and hyaline drip) dystrophy in hepatocytes. hepatocytes - the nucleus is stained with reduced basafil in the center, the cytoplasm of which is occupied by vacuoles (droplets) of different sizes. We see that uneven fatty deposits (droplets) of hepatocytes located on the edges of liver fragments are pressing down - fatty degeneration has developed. The sinusoid cavity and the perisinusoidal area (Disse) are enlarged and swollen. Metabolism is manifested in the fact that the processes are slow, while a quantitative increase in binuclear hepatocytes is manifested in the process of decompensation.

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