"COMPARATIVE CHARACTERIZATION OF LIVER MORPHOMETRIC PARAMETERS DURING PREGNANCY IN EXPERIMENTAL CHRONIC RENAL FAILURE."

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ABSTRACT

The treatment of liver pathologies in chronic renal failure observed during pregnancy worldwide and the prevention of their consequences remain a medical and social problem.Despite the development of methods of prevention and diagnosis, treatment of liver diseases, mortality rates continue to occupy a leading position.In our country, special attention is currently being paid to improving the social protection and health care system of the population, improving the quality of diagnosis, treatment and prevention of chronic liver diseases.

In some cases, based on morphological changes in internal organs, methods of differential diagnosis of the immediate cause of complications have been developed, each of which can have several consequences for the body at once, which can lead to death. The installation of such experiments is unthinkable without knowledge of the morphological and morphometric parameters of laboratory animals, which is an important part of the model experiment and remains poorly understood to this day.

Introduction. I will give us an example of what was done before the experiment.The combination of zidovudin, lamivudin and ritonavir in high doses to pregnant rats has been attributed to morphological and physiological changes in the mother's liver and kidneys.On the other hand, the absence of changes in fetal organs has been studied in the experiment.

(Morphological and physiological analysis of the liver and kidneys of pregnant rats and their fetuses treated with zidovudine, lamivudine and ritonavir Association for the entire period of pregnancy (Adriana Wagner -2018).

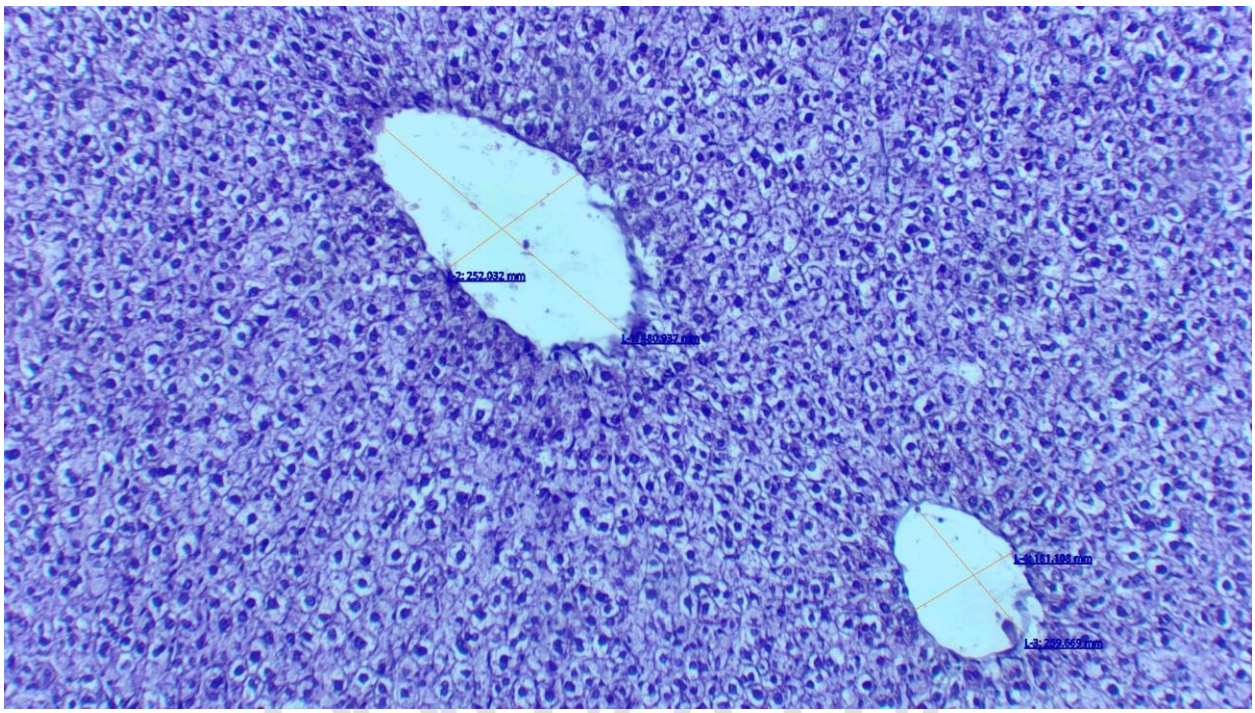
There has been a study of a significant correlation between high consumption of fatty foods in white rats and structural changes in the kidney, such as decreased glomeruli number density, deformities, significant expansion of renal vessels and tubules, glomerular necrosis and atrophy, and thickening of the basal membrane.(Muhammed Eyüp Altunkaynak, Elvan Ozbek, Berrin Zuhal Altunkaynak, Ismail can, Deniz Unal and Bunyami Unal-2020).

Direct injection of embryonic cells provides a quick tool for epithelial differentiation and

tubulogenesis to develop the necessary stages, including the compound complex and the assembly of the basal membrane. In addition, there are grafting techniques that allow the study of embryonic renal vascularization and the effects of endothelial cells on differentiating embryonic cells. (Steenhard, Brooke M -2021)

The purpose of the scientific work: to study the post-chronic renal failure changes in morphological and morphometric indicators of the liver of fetal rats without a white breed.

Results from the experiment: a study of morphological and morphometric indicators of the liver of pregnant white broodless rats.



Morphometry of liver tissue. Paint G-E. EU 10x10 OK.

1. The central venous wall is deformed and hollow in dimensions.
2. In the cytoplasm of hepatocytes, small volumetric vacuoles (drops hepatocytes - the nucleus is in the center, basafil painted.
3. The space of the sinusoid space and the pericinusoid area (disse) is narrowed.
4. We can see that the Kupfer cell and the bi-nuclear hepatocytes are numerically abundant.

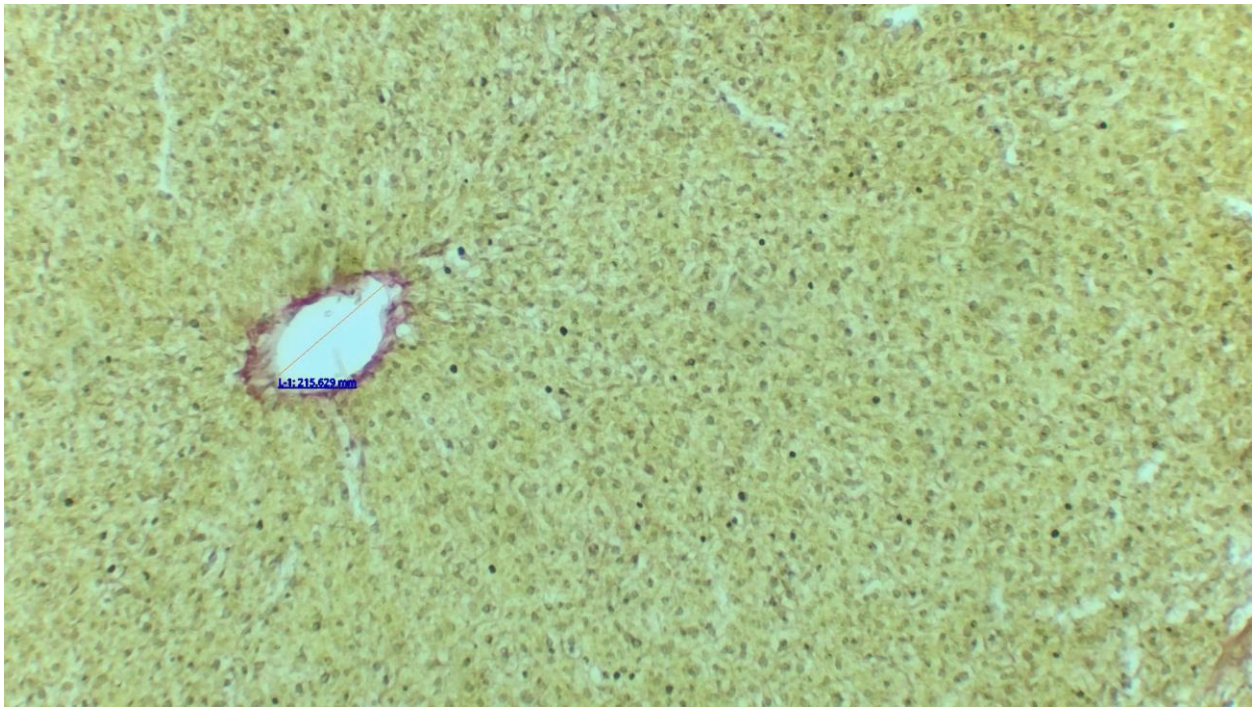
Hepatocytes are the main cell of the liver. The structure of the hepatocyte cell is cuboid or polygonal. The nucleus is in the center of the cell,round in shape, in most cases bi-nuclear.The cytoplasm is stained eosinophilic. In its cytoplasm, it is rich in an endoplasmic lattice (organelle synthesizing blood plasma proteins) and a large amount of granular endoplasmic lattice (organelle synthesizing toxins, bilirubin and bile fluid). In hepatocytes, the following surfaces are differentiated.Sinusoidal surface of hepatocytes. The sinusoid has a surface facing the capillaries , carries out the exchange of substances, the synthesis of proteins.Biliary surface-bile fluid synthesis occurs. The apical surfaces of the two adjacent hepatocytes, which have pits on the membrane , fuse to form the wall of the bile duct.Hepatocytes are surrounded by fine connective-reticulin fibers, forming a stroma.Hepatocytes combine to form the liver plate.The plates also form a cross-anastamosis, between which sinusoid capillaries are

located, which are considered branches of the portal vein and hepatic artery.

The wall of sinusoid capillaries will contain Kupfer cells of phenestrated endothelium and star-shaped reticulo-endotheliocytes. The basal membrane becomes incomplete-consisting of fenestres.

Kupfer cells perform the following tasks; phagocytosis of blood-borne antigens. By breaking down aging erythrocytes, iron is bound to ferritin protein , stored as a reserve, and involved in the formation of erythrocytes at the required time.

Between sinusoids and hepatocytes is the pericinusoid space , this space is called the disse space. This gap is fundamental in the processes of metabolism.



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Conclusion: in our experiment, we studied morphological and morphometric indicators of the liver of fetal white-breed rats. We can see a general venous fullness in the central vein, a deformation of the central venous wall, a fullness with an enlarged cavity, as a result of a slowdown in the circulation of venous blood.The consequence of this is the expansion of the sinusoid space , fullness and narrowing of the cavity in the pericinusoid area (disse). Narrowing of the disse cavity directly affects the processes of metabolism, slowing down these processes. Processes such as slowing down the exchange of substances in the liver ,hypoxia are obvious evidence of uneven thickening of light pink collagen fibers around the central vein.Hypoxia has a direct effect on the functional state of hepatocyte - cell structures . Small volumetric vacuoles(droplets)

appeared in the cytoplasm of hepatocytes .This process led to a slight violation of the water-electrolyte balance inside and outside the cell. It was found that fluid in the form of vacuole drops passed into the hepatocytes. In this, hepatocytes - the nucleus is in the center, basafil is painted. The cytoplasm is eosinophilic stained, wide in size. The dimming of the blood increases the agglutination of erythrocytes, and this led to an increase in the Kupfer cells (the function of which was described above) in the sinusoid wall. We can see that regenerative regeneration processes are enhanced as the body's capacitor processes increase numerically between hepatocytes with bilucleated hepatocytes

There is another ito star-shaped cell in the disse cavity. The function of the ITO cell .Accumulation of vitamin A and fat-soluble vitamins . Synthesis of extrasellular matrix i.e. is converted to myofibroblasts in the wound Mahal.

Liver slices are the structural functional unit of the liver. In the middle of each blotch is the central vein (Vena centralis). The sinusoid capillaries and liver plate are radially oriented to the central vein. The liver fragments are separated by a cross-hepatic intercostal connective tissue, and a hepatic triad localizes in this area.

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