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HISTOLOGICAL CHANGES OF LIVER HYPERTROPHY ON IRRATIONAL PROTEIN NUTRITION

Annotation : Daily foods contained proteins in the body organic substances inside amount and importance in terms of the first place occupies. Proteins in the body provide several important: plastic , management and signal, catalytic , movement , transport, protection , energy and another functions. Therefore , the amount of protein in daily food should be normal. Changing of amount and quality of protein will be reason to appear functional and morphological changes.

Key words: histological changes, irrational changes, white rats, central vein, protein.

NORATSIONAL OQSILLI OVQATLANISHDA JIGAR GIPERTROFIYASINING GISTOLOGIK O'ZGARISHLARI

Annotatsiya : Kunlik oziq-ovqatlar tarkibidagi oqsillar organizmdagi organik moddalar ichida miqdor va ahamiyati jihatidan birinchi o'rinni egallaydi. Oqsillar organizmda bir qancha muhim: plastik, boshqaruv va signal, katalitik, harakatlanish, transport, himoya, energetik va boshqa vazifalarni bajaradi. Shu sababli, kunlik oziq-ovqat tarkibidagi oqsil miqdori me'yorida bo'lishi kerak.Oqsillarninng miqdor va sifat jihatdan o;zgarishi funksional va morfologik o'zgarishlarga sabab bo'ladi.

Kalit so'zlar:gistologik o'zgarishlar, noratsional ovqatlanish, oq kalamushlar, markaziy vena, oqsil.

Materials and methods: Experiments carried out during one month to study histostructural changes of the liver in non-rational protein diet . Experiments happened on 30 sexually mature white rats with a total body weight of 150-160 grams for 30 days. During the experiment, laboratory animals were fed with only boiled egg protein and water.

During one month, the appearance of the animals, the color and condition of their fur, their appetite, sensitivity to noise and light, and other general conditions were observed and recorded. The daily food intake and total body weight of the animals were measured regularly every day until the end of the experiment.

The appearance of the white rat's fur became clearer and cleaner until the seventh day of the experiment, and then gradually became dull and sparse. By the end of the experiment, the wool became dull, thin and sparse. The sensitivity of these animals to external influences (especially to noise) began to increase from the seventh to the eighth day of the experiment, and by the end of the experiment, they became overly sensitive to any influence. The appetite of the animals of this group was in a variable state, it reached the highest level on the sixth day of the experiment, and fell to the lowest level on the eleventh day.

Histological slides are made from healthy white rats of control groups in 30th day of the experiment The slides were stained with hematoxylin-eosin and viewed under a microscope.

Results : When the liver of healthy white rats was examined macroscopically: the length of the liver is 4-4.5 cm , the width is 3-3.5 cm, the surface is flat, the edges are clearly defined, the consistency is uniform. In the histological micropreparations prepared from them: the boundaries of the liver lobes are unclear, the lobes are joined to each other. Because the connective tissue around the fragments is very poorly developed. In the center of the lobes, the central veins have almost the same structure, unchanged. Liver triads are unchanged, in their usual position. Hepatocytes are unchanged, the nucleus is located in the same plane in the cytoplasm. The diameter of the liver lobe is 502±1 μm, the diameter of the central vein is 26±0.5 μm, the size of the liver plate is 258±0.6 μm, the width of the hepatocyte is 9±0.7 μm , the length of the hepatocyte is 10±0.6 μm, the diameter of the nucleus is 5±0 μm. capillary diameter was 2.5±0.1 .

In the macroscopy of the liver taken on the 30th day of protein nutrition: length 6-6.5 cm, width 5-5.5 cm, the edges are indented, the plane of the surface is slightly lost. Microscopy of the histological micropreparation showed the following: enlargement of the central vein is detected, liver plates increased in size, hepatocytes and nuclear size increased. Fullness in the central vein. Sinusoidal capillaries are visible. The triads of the liver are also enlarged . The cytoplasm of hepatocytes is oxyphilic, and the nucleus is basophilic. In the histostructure of the liver of white rats on the 30th day of protein feeding: the diameter of the liver lobe is 766±1 μm, the diameter of the central vein is 114±1 μm, the size of the liver plate is 375±1 μm, the hepatocyte width is 18.5±0.5 μm , the hepatocyte length is 18.5 ±0.5 μm, core diameter 12±0.2 μm, capillary diameter 14.5±0.4 μm.

Conclusion:

1. The peculiarity of the anatomy of the liver of white rats is that the organ consists of four parts and there is no gall bladder.

2. The body weight of experimental animals increased during the first days of the experiment. Then a decrease was observed until the 30th day of the experiment.

3. When comparing the morphometric results obtained in the histological examination of the liver tissue in experiments carried out on white rats, histological changes were revealed. Changes in the macro- and microstructure of the liver at each stage of the experiment consisted of an increase in the size of the components that make up the tissue structure: central vein, liver plate, sinusoid capillaries, liver triads, hepatocyte and its nuclei.

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