BS01

Changes in the anthropometric indices of the rats with obesity on the background of the probiotic administration

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Introduction: The microbiota affects on homeostasis, controls body weight. Microbiota changes lead to intestinal permeability increasing. This part of the pathogenesis, brings to obesity. Therefore, probiotic therapy can be effective in treating obesity.

Materials and methods: Experiment was performed on 44 rats. They were divided into 3 groups: 1.obesity group (n = 17), 2.correction group (n = 16), 3.control group (n = 10). Subcutaneously groups 1 and 2 were injected at 2, 4, 6, 8, 10 days after birth with sodium-glutamate by 4 mg/g dose diluted in saline. Rats of control group were injected subcutaneously with saline by 8 mcl/g dose. Animals had normal diet in vivarium 4 months. Rats starting from 1 month old and then next three months were injected intragastrical by probiotic *Lactobacillus casei* IMV-B-7280 by $5x10^8$ CFU/kg (50mg/kg) dose in 2 weeks courses and 2 weeks break. Animals slaughter was performed by thiopental-anesthesia and bloodletting. Animals visceral fat mass, length, body weight were measured. Body mass index (BMI), obesity index (Lee index) were calculated.

Results: Neonatal administration of sodium-glutamate leads to the development of obesity, as evidenced by the body weight and visceral fat mass growth, BMI, Lee index compared with the control group. The administration of probiotic normalizes anthropometric indices of glutamate-induced obesity, as evidenced by a decrease of body weight, visceral fat mass and Lee index compared to the 1st group.

Conclusion: Probiotic *Lactobacillus casei* is effective in the correction of glutamate-induced obesity. This is evidenced by the normalization of anthropometric

BS02

Lacrimal glands structure components of the laboratory rat

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Introduction: The lacrimal glands involvement in the pathological processes, animals and in humans both, requires more detailed knowledge of their morphology, especially in their normal functioning. It is important in the pathomorphological diagnosis.

Materials and methods: We obtained 2 lacrimal and 1 Garder's gland, in total of 25 biopsies, from 5 laboratory male rats by dissection from each side. The material was fixed with 12% neutral formalin, after which the glands were placed in paraffin according to the traditional method. A series of 4 mcm thin histological slices with hematoxylin and eosin staining were obtained from paraffin blocks.

Results: Lacrimal fluid of laboratory rats is formed by glands of different localization. The extraorbital gland is located outside of the orbit, around the parotid salivary gland. It has connective tissue capsule. It is much larger than the infraorbital gland. The main duct has a path to a lateral corner of an animal eye and is allocated easily enough. The extraorbital lacrimal gland of the rat consists of parts and excretory ducts of various caliber. Its lobes are separated from each other by wide layers of connective tissue. Arterial vessels and venules are clearly visualized in it.

Conclusion: The lacrimal glands of laboratory rats have an individual well-defined connective tissue capsule. The intraepithelial interstitial spaces contain vessels of the hemomicrocirculatory tract, mainly capillaries, precapillary arteries, and postcapillary venules, in the volume of the extraorbital and infraorbital glands. Arterioles and venules are usually visualized for its boundaries.