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STRUCTURAL ORGANIZATION OF MUCOUS MEMBRANE OF RAT TONGUE IN NORM AND IN DIFFERENT TERMS OF EXPERIMENTAL DIABETES MELLITUS

The study is the part of research work “Morphofunctional characteristics of some organs and functional systems at diabetes mellitus in postnatal ontogenesis” (state registration 0109U001106).

Key words: tongue,
capillary,
immunocompetence
cells, rats

ABSTRACT. Background. Despite the large amount of research in the field of diabetes mellitus the problem of relationship between changes in the number of immune cells and the restructuring of the tongue mucous and microvasculature remains unexplored. **Objective.** To investigate the structural organization of the tongue mucous in normal rats and its changes in diabetes mellitus. **Methods.** Diabetes mellitus was modeled on 40 rats of experimental group by streptozotocin-induced method. Animals were led out of experiment after 2, 4, 6 and 8 weeks after beginning of diabetes modeling. Standard histological, scanning electron microscopy and morphometric methods were used during research. **Results.** It was determined that changes in microvasculature and mucosa restructuring are in direct ratio that is manifested by increased permeability of vascular wall for immune cells (within 6 weeks from the beginning of the simulation of experimental streptozotocin-induced diabetes) and a sharp decrease in the number of intraepithelial leukocytes after 8 weeks, indicating a gradual suppression of local resistance mechanisms. **Conclusion.** Complex investigation of morphological restructuring of the tongue tissues in diabetes mellitus will help to develop methods for correcting pathologies observed in diabetic glossitis.

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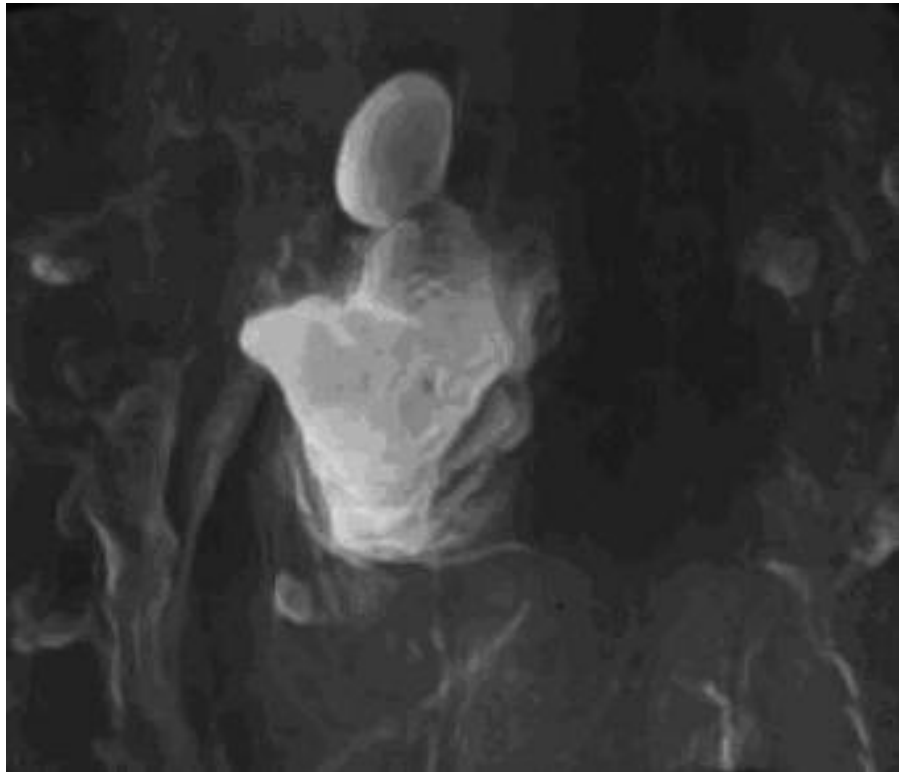


Fig. 1. Stereologic structure of the conical papilla of normal rat lingual mucosa. $\times 650$.

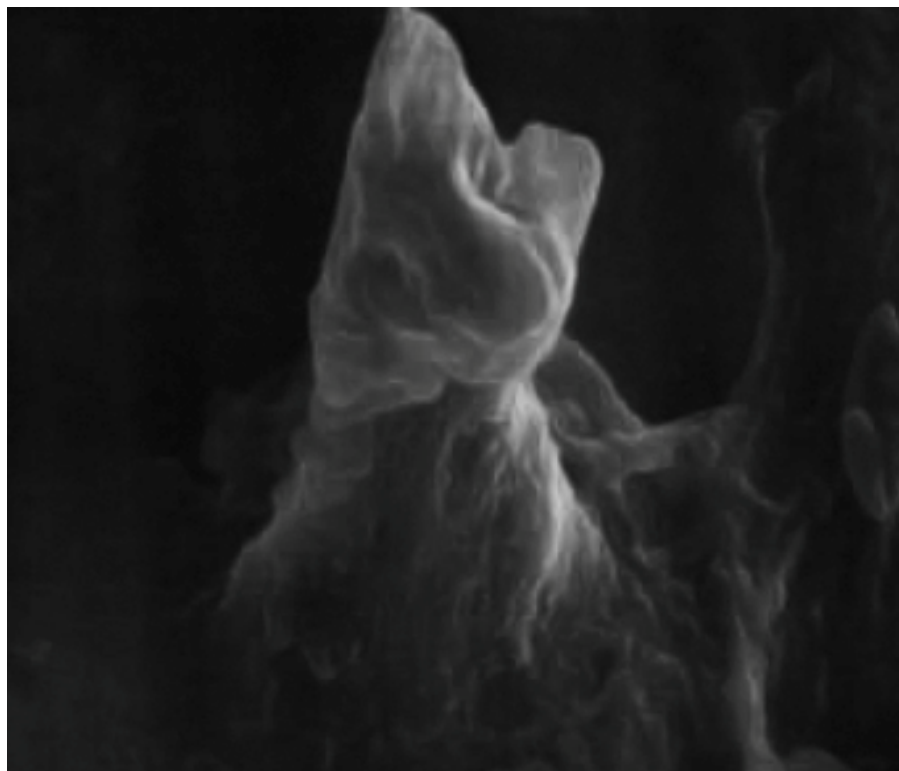


Fig. 2. Stereologic structure of the conical papilla of rat lingual mucosa 6 weeks after the onset of experimental streptozocine-induced diabetes mellitus. $\times 650$.

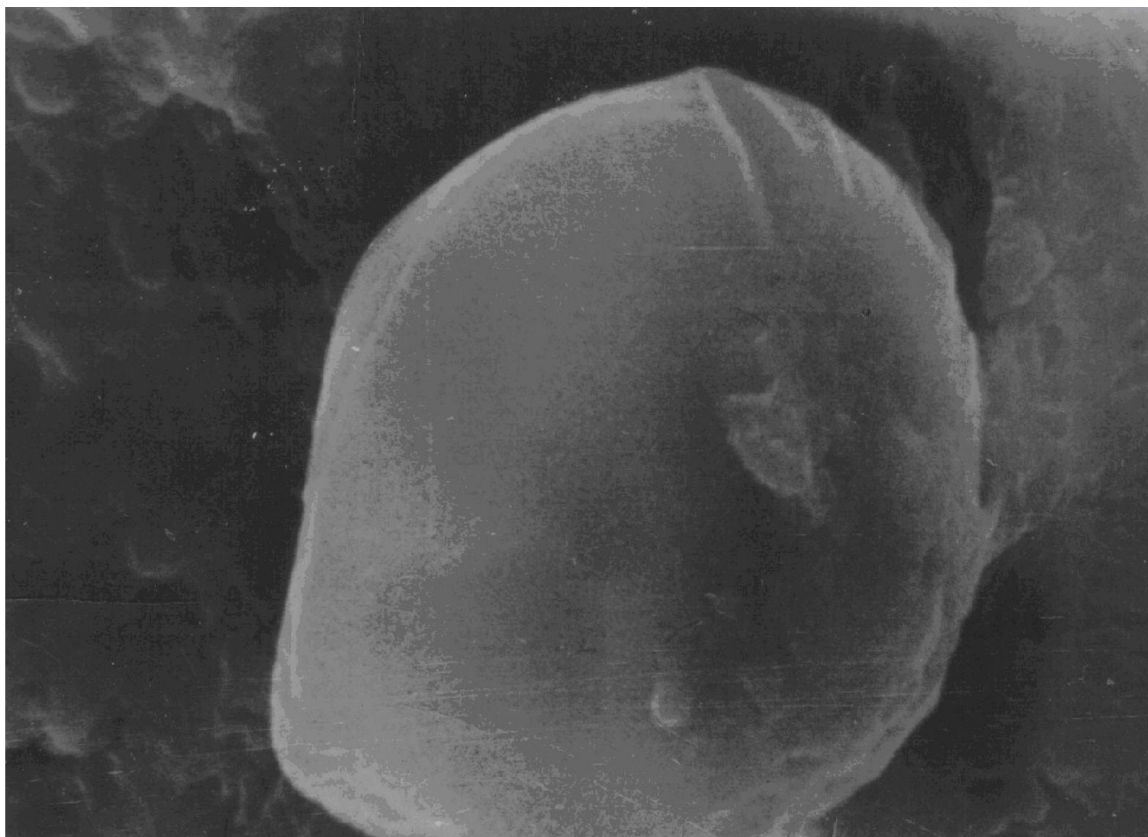


Fig. 3. Stereologic structure of the conical papilla of rat lingual mucosa 8 weeks after the onset of experimental streptozocine-induced diabetes mellitus. $\times 650$.

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