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MICROECOLOGY OF THE PRE-EPITHELIAL BIOFILM OF THE COLON OF ALBINO RATS WITH EXPERIMENTAL THYROTOXICOSIS

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The microbiome of the preepithelial biofilm of the large intestine in direct contact with the body also interacts with the immune and other systems that emphasizes the topicality of its study in various diseases.

Thus, the aim of the study was to determine the taxonomic composition, population level, analytical microecological indices and the degree of microecological disorders of the preepithelial biofilm of the large intestine in albino rats with thyrotoxicosis.

Experiments were carried out on 25 mature male albino rats weighing 220 - 240 g, of which 15 animals constituted the control group (intact animals), and 10 rats were included into the main group. The experimental thyrotoxicosis was simulated by intragastric administration of L-thyroxine for 14 days. Under sterile conditions laparotomy was performed, a segment (up to 3 cm) of the large intestine with its contents was taken. A washed portion of the intestine was homogenized with a sterile 0.9 % NaCl solution. A series of ten-fold dilutions with 10^{-2} to 10^{-7} concentrations of the initial mixture was prepared. From each tube 0.01 ml was seeded on solid optimal nutrient media with subsequent isolation and identification of microbes according to morphological, tinctorial, cultural and biochemical properties. To determine the mechanisms of contamination of the biotope by microorganisms ecological method was applied enabling to study the microbiological characteristic of coexistence of the representatives of the association of the" microorganism - microbial ecosystem" and the direction of changes in the microecology of the cavity of the colon during destabilization of microbiocenosis in thyrotoxicosis. A dominance typology was based on determination of the constancy index . To characterize the diversity of microbiocenosis of the colon cavity the Margalef's index of species richness was calculated. To determine the dominance degree of each taxon in the biotope the Berger-Parker's and Simpson's indices were taken into account.

In some animals, *Bifidobacteria* and *Lactobacilli,* as well as *Bacteroides* and *Escherichia*, are eliminated. A pronounced deficiency of not only *Bifidobacteria* by 48.50 % and *Lactobacillus* by 94.59 %, as well as *Bacteroides* by 44.85 %, was found. Determination of the quantitative dominance of each taxon displayed that a dominant role of *Bifidobacteria* in microbiocenosis is reduced by 82.76 %, *Lactobacillus* - by 2.20 times, and the role of *Bacteroides* in microbiocenosis of the epithelial biofilm of the large intestine of albino rats with the experimental thyrotoxicosis - by 43.04 %, *E. coli* - by 7.18 %, but the role of opportunistic *Enterobacteria* and *Staphylococci*, which contaminated and colonized the mucosa of the large intestine, increased substantially. It was shown that in half of the animals with experimental thyrotoxicosis in pre-epithelial biofilm dysbacteriosis of second degree was formed, characterized by deficiency of bacteria of the genus *Bifidobacterium*, *Lactobacillus*, and *Bacteroides* and elimination of *Peptostreptococci*, *Enterococci*, *Clostridia* with simultaneous colonization of mucosa by opportunistic *Enterobacteriaceae* (*Proteus* and *Klebsiella*).

So, experimental thyrotoxicosis is accompanied by a partial elimination from the biotope of the epithelial biofilm of the large intestine of *Bifidobacteria* and *Lactobacilli*, as well as *Bacteroides*. Elimination of *Peptostreptococcus*, *Clostridia* and *Enterococci* from the colic mucous membrane occurs in all the experimental animals as well as colonization of the biotope with opportunistic *Enterobacteria* (*Proteus, Klebsiella*) and *Staphylococci*.

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ANALYSIS OF THE ADVENTITIOUS SPECIES *ADONIS AESTIVALIS* ON THE BUKOVINIAN PRECARPATHIANS TERRITORY

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Adonis aestivalis is an annual plant from *Ranunculaceae* family, which grows about 40 cm tall and flowers from May to August. *Adonis aestivalis* is widely spread on Bukovina territory. *Adonis aestivalis* contaminate aboriginal flora genetic fond, contribute to the weakening of it's zonal traits and to the vegetation cover productivity reducing. *Adonis aestivalis* is a poisonous plant and should only be used medicinally under medical supervision. *It leafs* contain carbohydrates, adonite, tsimarin, cardenolides, carotene in it composition. The flowers contain astacin, and carotenoid. In the fruits there are alkaloids.

The aim of our research was to analyze *Adonis aestivalis* immigration time, its origin, water regime of the soil, relation to lighting, existence duration on the territory and ways of seeds dissemination on the Bukovinian Precarpathians territory.

Our research showed that on the Bukovinian Precarpathians territory *Adonis aestivalis* appeared at the end of XVI the century, so, as most of the adventitious types of this territory it is related to archeophytes and it is originated from European-Mediterranean. According to life forms classification (C.Raunkiær) this species is monocarpic and therophyt. According to the water regime of soil, all species are classified to 6 ecological groups. *Adonis aestivalis* is xeromosophyte. That means, it can endure prolonged drought. In relation to lighting, this is a species that grows in open, well-lit areas and belongs to the group of heliophytes, which are dominated on the Bukovinian Precarpathians