MORPHOLOGICAL CHANGES IN THE KIDNEYS OF PIGS WITH ACUTE COLIBACILLOSIS ON THE BACKGROUND OF EXCESS COPPER, IRON, COBALT

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Despite the introduction of new technologies of breeding and antimicrobial and specific means of combating with colibacillosis, this infection remains one of the most urgent problems of livestock. Circulating strains of E. coli have different antigenic structure and set of pathogenicity factors that determines the characteristics of their interaction with the host. In modern nomenclature, enterotoxins of esherihies divided into three main types: thermally labile, thermostable and shyha-like. The first two increases the permeability of cell membranes of intestinal epithelium, trigger diarrhea, the third inhibits protein synthesis by cells of the body with the formation of hemolytic uremic syndrome and hemorrhagic colitis.

Esherichia not only dominates as cause of the pathology of the digestive system, but also tends to increase their frequency. The most important are the so-called enterohemorahical strains of E. coli. Esherichia coli causes damage of the intestines and incoming in circulation of verotoxin. The latter acts on cells that have specific receptors to verotoxin that found in the endothelium of the kidney, colon, central nervous system, neutrophils, monocytes. The largest cluster of receptors observed in the endothelium of the capillaries of vascular glomeruli.

Toxic effects of pathogenic E.coli. and excessive amounts of toxicants in feeds lead to increased hemodynamic, dystrophic and necrobiotic changes in the kidneys of pigs. To the action of toxicants are most sensitive the juxtamedullary nephrons and vascular glomeruli. This action was represented by intracapillary glomerulonephritis, atrophy. Observed the exclusion the part of the nephrons from the process of urine formation. In the process of compensatory-adaptive reactions in the kidneys involve all units and components of the nephrons (hypertrophy and hyperplasia of all elements of the glomerulus) and vascular system (hyperemia of the capillaries).