

PATHOLOGICAL ANATOMICAL CHANGES AND THE RESULTS OF HISTOLOGICAL EXAMINATION IN RABBIT COLIBACILLOSIS

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Annotation

The article presents the features of the transformation of clinical signs postmortem morphological changes and the manifestation of a peculiar appearance.

Keywords: histocut, dystrophy, necrosis, karyolysis, infiltration, point blood outpouring, heart attack.

Аннотация

Мақолада қуёнлар колибактериоз касаллигининг клиник белгилари, кечиш хусусиятлари, патологоанатомик ва морфологик ўзгаришлар ҳамда гистокесмалардаги ўзига хос кўринишларнинг кузатилиши ёритилган.

Аннотация

В статье приведены особенности клинических признаков, патологоанатомических и морфологических изменений а также своеобразие гистологической картины при данном заболевании.

Ключевые слова: гистосрез, дистрофия, некроз, кариолизис, инфильтрация, точечное излияние крови, инфаркт левого предсердия.

Relevance of the Topic

Currently, there is a growing interest in the development of rabbit breeding among farms and the population of the Republic of Uzbekistan. At the same time, the increase in the number of rabbits under care, and the presence of large numbers of these animals in a limited area, in turn, cause some serious problems. Violation of veterinary and sanitary rules when keeping and feeding rabbits leads to various infectious and non-infectious diseases. One of these diseases - colibacillosis in rabbits - remains one of the most pressing problems.

Rabbit colibacillosis is an acute infectious disease caused by E. Coli, a shorter and wider bacterium with a rounded tip (0.2-0.7 x 2-4 microns), rod-shaped, gram-negative, without spores and capsules. The disease is accompanied by severe

intoxication and diarrhea, which occurs in rabbits for 1-4 days, usually up to 5-10 days (A.I. Yatusovich and others. 2008). Currently, rabbit colibacillosis occurs in rabbits aged 5 to 14 days in the local conditions of the country.

Deficiencies in storage and care lead to a decrease in the resistance of rabbits and their offspring, a deficiency of vitamins A and B and metabolic disorders, which leads to a secondary disease, that is, the causative agents of colibacillosis enter the body through food, water, dishes, feces of birds and rodents.

Materials and Methods

The pathological samples brought from the districts of the Samarkand region to the laboratory for the study of diseases and pathological anatomy of young cattle of the Research Institute of Veterinary Medicine have been investigated. According to the history, rabbits aged 10-14 days were infected with colibacillosis in the form of enteritis (Figure 1), with yellowish-gray liquid diarrhea, weight loss, loss of appetite, tremors and death within 3-5 days. Изменения наблюдались в основном в желудочно-кишечном тракте при патологическом вскрытии кроликов. The presence of a viscous mass in the stomach, hemorrhagic inflammation of the mucous membrane, punctate bleeding (Figure 2), infiltration of the small intestine, hemorrhagic catarrhal enteritis of the mucous membranes, the formation of foci of necrosis were observed. Enlarged spleen and liver, pinpoint hemorrhages on the surface, choking with blood, nephritis in the kidneys, pinpoint bleeding, bladder filling with urine, protein deposits in urine, left ventricular infarction (Figure 3) and general toxicosis.



Figure 1. Carcasses of rabbits up to 10-14 days of age infected with colibacillosis. Figure 2. Hemorrhagic inflammation of the gastric mucosa, punctate hemorrhage.



Figure 3. Left ventricular infarction.

Research Results

All pathological samples from internal organs were fixed in 10% formalin, histological incisions made after anesthesia, hardening, paraffinization were examined under a microscope, the following morphological changes characteristic of intoxication under the influence of *E. Coli* were observed in rabbits.

Decomposition of hepatocytes in the liver, endovasculitis, perivascular edema, swelling of fibrin filaments, infiltration of lymphocytes, hemostasis in the vessels develop. Hemolysis bodies were observed around the central veins, and hemolysis was observed in the cytoplasm of perivascular hepatocytes. (Figure 4)

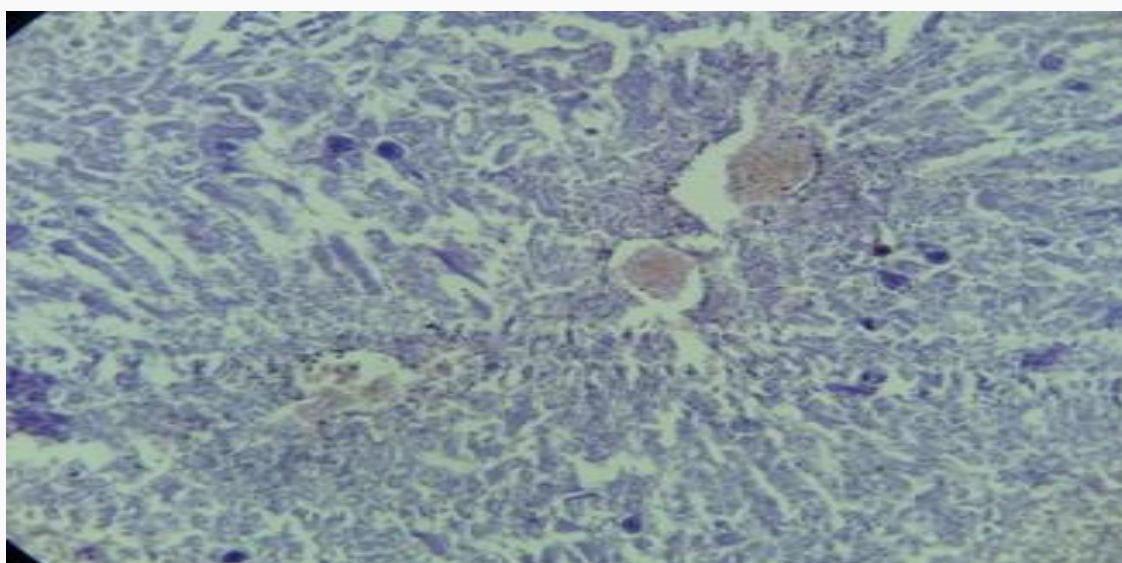


Figure 4. Endo- and perivascularitis, infiltration of vascular and hepatic barriers, hepatocyte necrosis, karyolysis.

Infiltrative inflammation in a special fundic part of the gastric mucosa is accompanied by a violation of the structure of epithelial cells that form the wall of

the fundic glands, that is, lysis of the nuclei. Interstitial argyrophilic cells in the pyloric part of the stomach developed degeneration and necrosis (Figure 5).

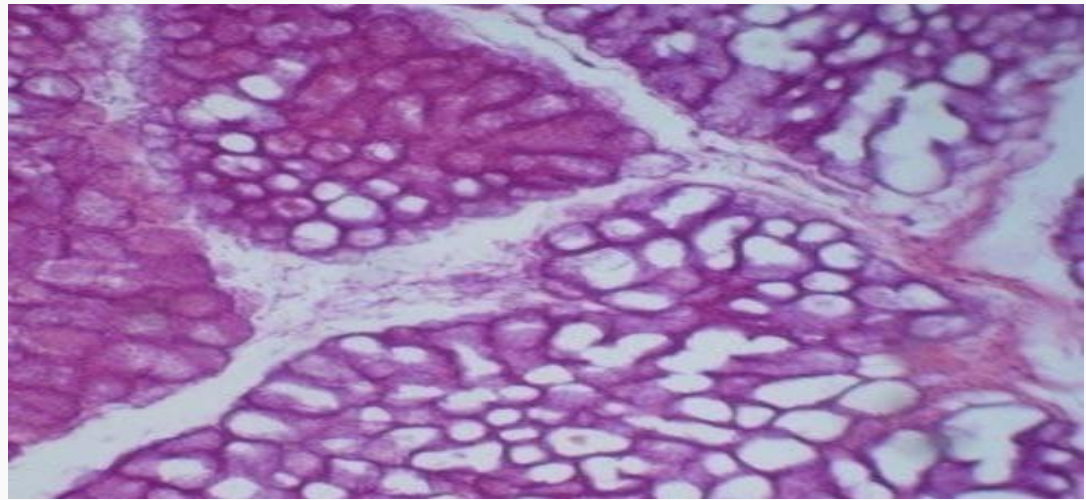


Figure 5. Necrosis of intermediate argyrophilic cells of the pylorus of the stomach. Cellular dystrophy. Vascular infiltration.

There are necrotic changes in the mucous membrane of the small intestine, desquamation of cells, naked lamellar plaque (Figure 6). In addition to hypersecretion and hyperplasia of the glands of the mucous membrane, infiltration of tissue elements (lymphocytes, neutrophils, leukocytes, plasmablasts, fibrocytes, fibroblasts) also develops in the layer. Hyperplasia, necrosis and desquamation of lymphoid follicles were observed. Focal necrotic changes were also observed in muscle fibers and serous membranes. (Figure 6)

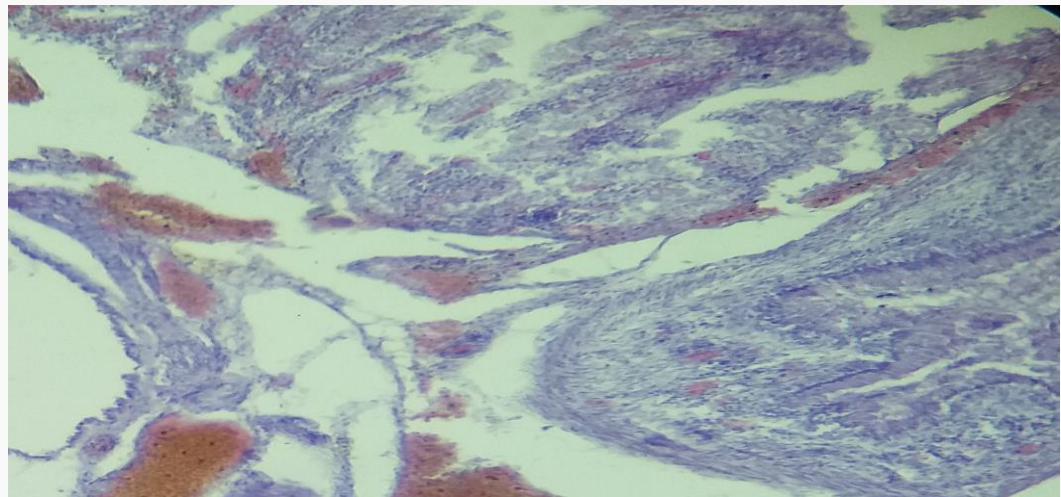


Figure 6. Necrosis and desquamation of the mucous membrane of the villi of the small intestine.

Thinning of lymphatic follicles, atrophy, edema of interstitial connective tissue, desquamation of vascular endothelial cells, perivascular edema, follicular necrobiosis are formed in the spleen. The connective tissue is expressed in the form of fibers, thinning of lymphocytes in the lymphatic follicles, and in some necrotic foci of the follicular lymphocytic space, pycnosis of the nucleus, hemorrhage under the capsule were revealed (Figure 7).

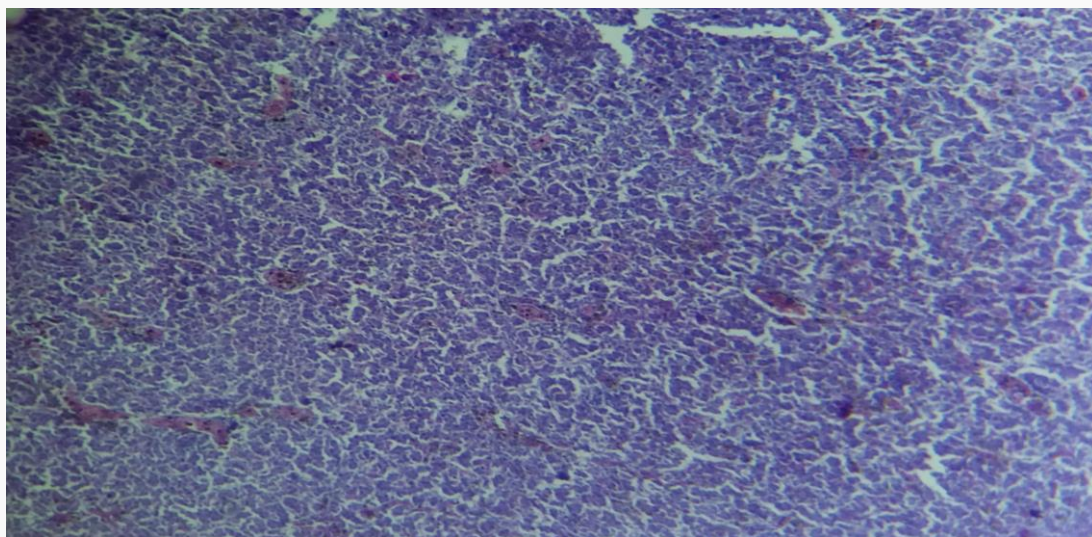


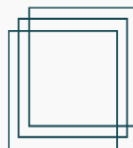
Figure 7. In the foci of spleen necrosis - the cavity of follicular lymphocytes, pycnosis of the nucleus, hemorrhage under the capsule.

Conclusions

Observations and studies have shown that colibacillosis is widespread in Uzbekistan, especially among young rabbits aged 10-14 days and is an acute disease that leads to the development of complex and irreversible pathological, anatomical and morphological processes in the body, which in turn leads to fatal the exodus of animals.

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