

MORPHOFUNCTION CHANGES IN SHEEP PARAMPHISTOMATOSIS

Akhmedov Sunnat Mukhitdinovich

Independent Researcher, Assistant, Samarkand State

University of Veterinary Medicine, Animal Husbandry and Biotechnology

Abstract:

In this article, morphofunctional changes in parenchymatous and digestive organs in sheep paramphistomatosis are presented on the basis of histological examinations.

Keywords: hemorrhage, necrosis, pneumonia, atelectasis, fibrosis, degeneration, atrophy, dysvquomation, dystrophy.

Relevance of the research topic

Paramphistomatosis is a common invasive disease among sheep, causing great economic damage to livestock. Morphological changes in internal organs in the disease have been little studied. The study of morphofunctional changes is of great importance in the diagnosis and treatment of the disease. In our research, we studied the morphological changes in the organs in detail.

The purpose of the study. Based on the study of morphofunctional changes in organs in sheep paramphistomatosis, it consists of studying the methods of diagnosis and comparative diagnosis of the disease.

Research materials and methods. Research We isolated the internal organs of sick sheep from farms and private farms in Urgut, Toyloq, Bulung'ur and Jomboy districts of Samarkand region by evisceration method. Using pathanatomical and pathogistological methods, we studied the morphofunctional changes of parenchymatous and digestive organs.

Research results. When the internal organs of sheep were examined pathogistologically, the main changes occurred in the digestive and parenchymatous organs, and the strong development of necrotic, atrophic and dystrophic processes was observed in them.

Hemorrhagic necrotizing pneumonia is strongly developed in the lungs. The exudate in most alveolar spaces is filled with erythrocytes. Inter-alveolar capillary networks are expanded and filled with blood, as a result of which the barriers are also thickened, connective tissue fibers are swollen. As a result of these changes, a large part of the lung parenchyma is in a state of atelectasis.

Calicophoron calicophrum As a result of parasitism in the intestine, inflammations in the intestine developed in an atypical form. Intestinal folds, teats, and crypts are normal in

macroscopic examination, with paramphistomes interspersed. Characteristic changes in the organism in paramphistomosis are accompanied by pathological changes in the wall of the intestines. Epithelial cells of the nipple and crypts are swollen, vacuolization and granular protein dystrophy developed.

We found the following advanced inflammatory processes in the connective tissue under the intestinal mucosa: swelling, round cell infiltration, vascular hyperemia. Proliferation and hyperplasia of epithelial cells and even transition to metaplasia were found in some areas of the mucous membrane. The shape of the epithelial cells has partially changed. The activity of packed cells increased, their number increased.

Mucous membranes are scattered, duodenal glands are swollen, the structure is broken, cysts of different sizes are formed. It was found that desquamation of epithelial cells developed in the output ducts of the duodenal glands. Muscle fibers were swollen and scattered.

Collagen fibers are swollen and split into fibers. Under the basal membrane of the intestinal mucosa, scattered fibrous unformed connective tissue is located, and blood and lymph vessels and nerve fibers were identified in this tissue.

The eosinophil response represents the body's defense mechanism against *C. calicophorum*. The infiltration of eosinophils in the intestinal tract indicates that the chronic process has not developed, in which fibrosis has not yet formed. Separate smooth muscle fibers are located in the stroma of the teats. In the teats, muscle cells have formed nodes, which are covered with arginophilic fibers, and the basement membrane is connected to the teat stroma in the mucous layers. The muscular layer of the mucous membrane consists of circular and long fibers. Smooth muscle cells are densely located in the inner part of the muscle layer, and scattered in the outer part. The connective tissue in the submucosa is swollen in paramphistomosis. Fibrous connective tissue has grown in places. When intestinal walls were histologically examined in sheep paramphistomatosis, morphofunctional changes were revealed in the epithelial layer of the teats. Degenerative-dystrophic and proliferative-metaplastic processes in the mammary epithelium, cell elements in the layer of young connective tissue, the initial stage of fibrosis formation are characteristic.

We always found lymphoid, plasmatic cells, histiocytes, eosinophils in the mucous layer, blood vessels were expanded and blood clots formed, the layer was swollen, elastic fibers were divided into fragments, collagen fibers were swollen and weakly stained. Muscle fibers are not uniformly stained, in some places larvae are partially visible, swelling has formed.

Atrophy of the large abdominal papillae, desquamation of the epithelial cells of the mucous membrane, infiltration of lymphocytes, eosinophils and histiocytes in the mucous membrane, the mucous tissue is scattered, collagen and muscle fibers are not well stained, swollen and fragmented. Vascular walls are thickened, solitary follicles are hyperplastic.

Mucoid and fibrinoid dystrophy in collagen fibers. In some places, multi-layered epithelial cells did not swell, while in other places, the reverse epithelial layer grew, thickened and

formed long epithelial suckers, that is, acanthosis was formed. These changes are especially characteristic of suckers where the parasite is attached. Connective tissue grew and cell proliferation developed. Long-term retention of the parasite revealed atrophy of the mucosa and corneal layer of microsuckers.

In the nucleus of smooth muscle fibers, chromatin is visible in a large size due to its dense arrangement, the intercellular spaces are widened, myofibrils become threadlike, in some places they are not even visible, other cells are eroded. Necrosis, growth of connective tissue, disruption of the structure of the glandular tissue in the mucous membranes of the 12th intestine and ileum. In the connective tissue of the muscle layer and stroma, swelling, scattered location of fibers, dilation of vessels were found. In the cortical layer of Charvi's lymph nodes, secondary follicles increased, large reactive centers were preserved in them. The parts of the brain are enlarged, a large number of lymphocytes have accumulated in the intermediate sinusoids. Lymphocyte and plasmacytic infiltration was seen in the reticular tissue between the follicles.

Conclusions: Paramphistomatous small horned animals cause specific changes in the body. In particular, hemodynamic, dystrophic processes are strongly developed in various organs of sheep, and these changes are very sharp and complex.

Desquamation of epithelial cells, infiltration of lymphoid, plasma cells, histiocytes, and eosinophils are characteristic in the mucous membranes of the large abdomen, scrotum, and 12 fingers.

Protein and fat dystrophy, hyperemia of blood vessels, cell necrosis and hemosiderosis develop in parenchymatous organs.

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