

EFFECT OF “DICROCELIUM DENDRITICUM” ON HEMATOLOGICAL, SERUM BIOCHEMICAL AND HISTOPATHOLOGICAL CHANGES IN SHEEP

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Abstract

The sheep have an important role in terms of economics, source of food and nutrition by providing milk, mutton, wool, etc. Albania is rich enough with the number of sheep that are contributing in the economics for the majority of rural population and also the national population, as well in addition to providing rich nutrients to poor and deprived rural populations. *Dicrocoelium dendriticum* is common parasite of herbivores in many countries, such as Albania. In chronic infections, this parasite causes biliary cirrhosis in livers of sheep and leads to economic losses. The aim of this study was to determine the prevalence of dicrocoeliasis in sheep. Infestation was perceived throughout liver's macroscopic examination in slaughterhouses and microscopic examination too. Another objective of this study was to assess the hematological and biochemical indicators in sheep infested naturally by *D. Dendriticum*. An abattoir study was carried out on a total of 224 sheep slaughtered and examined in Tirana, Albania. Hematological, serum biochemical and histopathological changes were investigated in 39 sheep. From post-mortem examinations of liver it has been found different lesions. Presence of *D. dendriticum* parasite on some occasions is light. The presence of fibrosis around bile ducts sometimes is minor while on some cases is large. Histology confirmed changes typical for dicrocoeliosis. The bile ducts epithelium was hyperproliferative, the hepatocytes were necrotic and degenerated, with mixed inflammatory component. The average value of hemoglobin (52.89 g / dl) and the number of erythrocytes (5.55 x106/μl) are lower compared to those of reference. Amongst leukocyte indicators with significant changes is has been found that eosinophils are reaching at 15.82%. Biochemical indicators that vary significantly in infection by *D. dendriticum*, are albumin, BUN, creatinine, total bilirubin, AST, ALT and lactate dehydrogenase (LDH). Creatinine (0.75 mg / dL) compared with the reference values appear low. Albumin (4.33 g / dL) in the infested sheep by *D. dendriticum* compared with reference values results higher. Compared with the reference values, lactate dehydrogenase values resulted higher.

Keywords: *sheep, dicrocoeliasis, hematologic, biochemical indicator.*