

Influence of Worm Infection on Pathological Effect of *Mycoplasma CapricolumCpripneumoniae* Pathogen in Goats

MaritimK¹., Ngeiywa M. M²., Siamba D. N³., Mining S. K⁴., Wesonga H⁵.

¹ Department of Animal Science, Pwani University

² Department of Biological Sciences, University of Eldoret

³ Department of Agriculture and Veterinary Sciences, Kibabii University

⁴ Department of Immunology, Moi University

⁵ Veterinary Research Institute, KALRO, Muguga

Abstract

Contagious caprine pleuropneumonia (ccpp), caused by *Mycoplasma capricolumcapripneumoniae* (*Mccp*), is a highly contagious disease of goats usually with a high morbidity and mortality in naïve goats and a major threat to food security. 24 goats were used to investigate immunopathological responses to live *Mccp* antigens. Twelve goats in two groups of six, were inoculated intratracheally with *Mccp* organisms. The remaining 12 goats, six in each group were used for contact transmission investigation. Clinical observations and records were done daily. Blood for sera analysis was collected weekly, while pathological data was collected at postmortem. Analysis of variance and Tukey Honest Significant Difference, a post hoc test, multiple comparisons of means were performed using R statistical packages (R x64 3.2.4 revised). The results showed that red and gray lung consolidations were significantly different statistically ($p < 0.05$) thus corresponding to the observed clinical signs, fibrin deposition along with pleural effusions in nematode infected groups. There was a high morbidity in group E2 (4/6) compared to E1 (1/6) that necessitated euthanasia for welfare reasons. Fibrous adhesion, a sign of chronic disease was more pronounced in none helminthes infected groups though not statistically significant ($p > 0.05$). Evidence from this study indicates that worm infection impacts negatively on immune response to microbial infection and the resultant pathological picture. It is recommended that deworming exercise should be carried out prior to planned vaccinations.

Key words: Contagious caprine pleuropneumonia, Helminths, Pathological lesions.