

A Case of Johne's Disease in a Cross-bred Cow

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Introduction

Mycobacterium avium subspecies paratuberculosis is the causative agent of a chronic, irreversible wasting disease of ruminants called Johne's disease (Hirsh, D.C. 2004). The present paper deals with a case of Johne's disease in a three-year-old crossbred cow.

History and Clinical Examination

Case of a three-year-old crossbred cow was reported to Veterinary dispensary, Muthukurissi, Palakkad district, with watery diarrhea since last five days. History and clinical examination revealed that animal is showing gradual weight loss and diarrhea but with normal temperature and appetite. Despite routine treatment with antibiotics, anti diarrheals and fluids, animal was not showing any improvement and became progressively lean and weak. Based on the clinical signs Johne's disease was suspected.

The animal became recumbent and died after two days. Postmortem was conducted and tissue samples like liver, spleen and piece of small intestine (ileo caecal area) ileo caecal lymph node, collected for bacteriology and histopathology and forwarded to district clinical lab, DVC. In the ileo caecal area of small intestine mild corrugations were observed in the mucosa and ulcers were also seen. Smear was prepared from intestinal scrapings and ileo caecal lymph node for acid fast staining. Acid-fast bacilli, which are slender rods in clumps, could be observed. Samples for histopathological examination were sent to Chief Disease Investigation Office, Palode and

results of histopathology were as follows; Liver with diffuse fatty changes in the hepatocytes, spleen with lymphoid depletion and intestine with chronic inflammatory changes with infiltration of lymphocytes, plasma cells, macrophages and giant cells. Based on bacteriology and histopathologic changes like chronic enteritis and nature of cellular reaction in the intestine, it is concluded as a case of Johne's disease.

Results and Discussion

A three year old cross-bred cow was presented with chronic weight loss and diarrhea which is neither offensive nor blood stained. The animal despite good appetite and feeding became progressively weaker and emaciated. Lesions suggestive of Johne's disease were found in the intestine upon postmortem. A smear prepared from intestinal scraping stained by Ziehl Neelsen's procedure revealed slender rods' occurring in bunches (Hirsh, D.C. 2004). Sections stained with Haematoxylin and Eosin revealed chronic inflammatory changes with infiltration of plasma cells, macrophages and giant cells. Diagnosis of Johne's disease can be made under field conditions by lesions of the bowel and postmortem and microscopic demonstration of the organisms in the epitheloid cells in the section (Sastry, G.A. 1983).

References

1. Hirsh, D.C. (2004): Veterinary Microbiology, Edn. 2nd Blackwell publishing, USA.
2. Sastry, G.A. (1983): Veterinary pathology, Edn. 6th CBS publishers and Distributors.

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