

19. HISTOPATHOLOGICAL CHANGES IN THE NERVOUS SYSTEM OF GOATS AFFECTED WITH ENTEROTOXAEMIA

D.D.N. de SILVA AND S.P.G. de S. GUNAWARDENA*

*Department of Veterinary Clinical Studies
Faculty of Veterinary Medicine & Animal Science
University of Peradeniya and
Veterinary Research Institute, Gannoruwa.

Enterotoxaemia caused by the toxins of *Clostridium perfringens* type D is an important disease of sheep and goats with a world wide distribution. The clinical manifestation of this condition is often associated with signs characteristic of nervous system disorders. Therefore, this investigation is aimed at studying the lesions in the nervous system of the goats affected with enterotoxaemia.

Four Beetal goats with neurological manifestations, and belonging to the Nikaweratiya farm were included in this study. The animals aged between 2-4 years started showing neurological signs such as opisthotonus, ataxia, salivation, circling and nystagmus with a variable degree of paresis. Two of the animals were quadriplegic and showed excessive salivation, rapid breathing and hyperaesthesia. These severely affected animals succumbed to the condition within 36 hours after the onset of signs. Detailed necropsy and histopathological examinations were performed on the two dead animals and one animal which was sacrificed. Urine analysis and a toxicological study using intestinal contents for mouse inoculation were also performed. Necropsy revealed congestion and oedema of the lungs, hyperaemia and petechial haemorrhages in the small intestines and pulp like consistency of kidneys. Urine analysis revealed presence of glucose and protein. Presence of clostridial toxins in the intestines was demonstrated by the mouse inoculation test. Histological lesions were seen in the brain of all affected animals. These cerebral lesions were characterized by symmetrical focal areas of encephalomalacia. The early lesions showed oedema and the leakage of plasma and red blood cells from the veinules and capillaries in the affected areas. These lesions are characteristic of Enterotoxaemia and are useful in differentiating Enterotoxaemia from other neurological diseases in goats such as cerebrospinal nematodiasis and hypocalcaemia.