STUDIES ON THE HOST RESISTANCE TO INFECTION WITH *ECHINOCOCCUS MULTILOCULARIS* LEUCKART, 1863

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Hokkaido University granted the degree of Master of Veterinary Medicine to the following graduate of the Graduate School of Veterinary Medicine on 30 June, 1980.

The author's summary of his thesis is as follows:

SOME HISTOPATHOLOGICAL FEATURES OF ARTHROPATHY IN HORSES

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This work was conducted in order to elicit a clue for elucidating the true pathological nature of arthropathies which are frequently found in domestic animals. Horses affected with "Equine Incoordination" were used as the object of investigation since they usually suffer from mild arthropathies. Fourteen horses, aged 8 to 62 months, run the course of 3 to 26 months, were histopathologically investigated in the vertebral joints, mainly, as well as in the nervous system.

All of the horses revealed in general mild arthropathies at autopsy. The following nervous system lesions which are pathognomonic of "Equine Incoordination" were observed in all of the horses: leukomyelodegeneration, optic nerve degeneration, formations of minute eosinophilic inclusion bodies, etc. Mesothelial proliferation was also observed in the dura mater of the spinal cord (in all of the 14 horses), medulla oblongata (in 8 out of 9 horses examined) and optic nerve (11/14).

The main lesions in the articular cartilages consisted of hydropic degeneration (in 204 out of 290 articular cartilages examined), focal necrosis or colliquation (14/290), interstice formation (7/290), perichondral proliferation on the chondral surface (109/290), and formations of minute eosinophilic cytoplasmic inclusion bodies in the chondrocytes (200/290). The main lesions in the articular capsules consisted of edema in the synovial membranes (in 51 out of 58 capsules examined), mesothelial proliferation (47/58), formations of minute eosinophilic cytoplasmic inclusion bodies in the mesothelial cells (6/58), edematous loosening and swelling of the blood vessel walls (58/58), and loss of nerve fibers and/or edema in the nerve bundles (20/58). Lesions similar to those seen in the articular cartilages were also observed in the epiphyseal cartilages (hydropic degeneration in 35 out of 91 epiphyseal cartilages examined ; focal necrosis in 39/91 ; inclusion bodies in 18/91) and in the intervertebral discs (hydropic degeneration in 21/54 ; inclusion bodies in 51/54).

The present observations may be a useful approach in future investigations of arthropathies in horses and other domestic animals.