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MUSCULAR DISEASES IN DOGS AND CATS

Prof. Dr. M. Schmidt, Dipl ECVN
Justus-Liebig Universität - Klinik für Kleintiere Neurochirurgie, Neuroradiologie und klinische Neurologie
Klinik für Kleintiere-Chirurgie
Frankfurter Str. 108, 35392 Giessen, Germany

The diagnosis and management of muscles disease can be straightforward and successful on the one hand, and frustrating and hard to diagnose on the other hand. In most, the main clinical sign is weakness, much less frequently pain. Muscle wasting can occur, with the pelvic girdle musculature mostly being more severely affected than the shoulder girdle muscles. Very often weakness first occurs in the distal muscles. Other signs include stilted gait, and pyrexia. Serum muscle enzyme concentrations can be elevated with no apparent correlation between enzyme concentrations and severity of clinical involvement. Polymyositis is defined generalized inflammatory myopathies regardless of etiology. Infectious causes are well known and include bacterial and protozoal agents (Neospora caninum). Leishmania, Ehrlichia canis, Sarcocystis neurona and Hepatozoon americanum are rare infectious agents. In immune mediated polymyositis muscle fibres expressing antigens of the major histocompatibility complex (MHC) are infiltrated by cytotoxic T cells, leading to myofibre necrosis. Serologic tests for infectious disease are negative in these dogs. Newfoundland and boxers are mostly affected. Host-related factors predispose for the disease, such as Dog Leukocyte Antigen Class II haplotype, leading to an increased risk in Vizslas. Immune reaction leads to a dyfunctions in masticatory and pharyngeal-oesophageal muscles in this breed. Regurgitation and megaesophagus may be observed. Muscle biopsy shows lymphocytic infiltrates in skeletal muscle. Dermatomyositis, first described in Collies, and later in the Shetland sheepdog, and Australian cattle dogs, is an uncommon immune-mediated generalized inflammatory disorder affecting the skin, skeletal muscle, and superficial blood vessels. Focal inflammatory myopathies include masticatory muscle myositis and extraocular myositis with cellular infiltrates restricted to these particular muscle groups.

Therapy consist of initiation of specific therapy for the infectious agent. In immune-mediated diseases, long-term immunosuppressive therapy is required. The typical initial glucocorticoid dose is 1-2 mg/kg prednisolone twice a day, combined with azathioprine 2 mg/kg or 50 mg/m2 once a day. Therapy usually

result in clinical improvement of immune-mediated condition. Therapy should be decrease to the lowest alternate-day dosage that maintains normal creatine kinase and improved muscle strength and mobility.

Labrador myopathy (Inherited myopathy/centronuclear myopathy) is caused by a defect in the mechanism by which muscle fibers are formed,leading to a deficiency of type 2 fibre's important for anaerobic muscle contraction. Affected dogs may be unable to walk and exercise normally due to muscle weaknes. The clinical signs worsen during periods of stress or excitement. Signs of muscle weakness start to occur from 6 weeks up to 7 months of age, and usually progress slowly in severity until approximately 1 year of age when the condition stabilises. With adequate care, dogs can live a normal lifespan, which is contrast to other dystrophies. Duchenne muscular dystrophy is an X-linked, degenerative muscle disease caused by a mutation resulting in a lack of the protein dystrophin with subsequent myofiber membrane fragility and necrosis. The disease course is highly variable between affected dogs, but usually fatal.