

Degenerative Myelopathy

Degenerative Myelopathy (DM) is a disease of the spinal cord in older dogs. The cause of the disease is not known, but there is likely a genetic component to the disease. Several infections, immune system disorders, and nutritional deficiencies have been investigated, but none have been shown to cause the disease. DM leads to degeneration of axons (nerve fibers) as they travel through the spinal cord, as well as the myelin coating around the axons that help speed up the signal transmission.

Breeds affected

DM is a disease of middle-aged to older dogs, especially large breed dogs. The most commonly recognized breed is the German Shepherd. The second-most common breed affected is the Welsh Corgi also are predisposed to the condition. Other affected breeds include American Eskimo, Bernese Mountain Dog, Borzoi, Boxers, Chesapeake Bay Retriever, Golden Retriever, Great Pyrenees, Kerry Blue Terriers, Poodle, Pug, Rhodesian Ridgeback, Shetland Sheepdog, Soft Coated Wheaten, and Wire Fox Terrier.

Clinical signs

The onset of clinical signs is usually insidious, and the disease is slowly progressive over the course of many months to 1-2 years. The most common clinical signs are hind limb weakness and incoordination, which often starts with scuffing or dragging one, or both, hind limbs. As the disease progresses, you might notice knuckling over of the hind limb paws, crossing over the hind limbs, hitting the feet together and increasing weakness. Muscle wasting in the hind limbs can be severe later in the course of the disease. The disease usually progresses to severe weakness to complete paralysis over the course of about one year. Front limb weakness and urinary or fecal incontinence may occur late in the course of the disease. This disease is NOT painful.

Diagnosis

At this time, the only way to 100% prove that your dog has DM is by autopsy. As a result, DM is con-

sidered a diagnosis of exclusion, meaning that we assume your pet has this condition after ruling out other common diseases that mimic DM, such as disc herniation, spinal cancer, and hip arthritis. MRI of the spine in dogs with DM is within normal limits. Spinal fluid analysis may show an elevation of the spinal fluid protein level which supports a diagnosis of DM, but this is not unique to this condition.

There is now a DNA test for DM available that can indicate whether your pet is AT RISK of developing DM. It DOES NOT tell if your pet CURRENTLY HAS or WILL EVER DEVELOP Degenerative Myelopathy. The test is best used by breeders to try to eliminate carriers and at-risk dogs from the breeding line.

Treatment

There is currently no known cure for the condition. Several veterinary neurologists have recommended a combination treatment including aminocaproic acid, N-acetylcysteine, vitamins and minerals, and exercise therapy in the hope of slowing the progression of the disease. To date, there are NO peer-reviewed scientific studies which have proven these supplements slow the progression. The only treatment that has been demonstrated to improve quality of life is canine rehabilitation (i.e., physical therapy). Many dogs do quite well for a significant length of time with a good quality of life. Once the weakness becomes severe enough, a canine mobility cart ("wheelchair") provides excellent mobility allowing DM patients to maintain a quality life.

Prognosis

Unfortunately, there is no cure for this disease and the weakness will continue to progress. Most dogs are unable to walk without assistance by one year. If a canine mobility cart is used, patients can live with the disease for two years or more before incontinence develops or the disease progresses to involve the front limbs. The important thing to realize is that this IS NOT a painful disease.