Degenerative Myelopathy

Degenerative myelopathy is a debilitating spinal disorder that is most commonly recognised in the German Shepherd Dog, although other breeds such as the Pembroke Welsh Corgi, Boxer, Rhodesian Ridgeback and Chesapeake Bay Retriever may also be affected. The condition has also been referred to as CDRM (chronic degenerative radiculomyelopathy).
What is degenerative myelopathy?

Degenerative myelopathy is a condition that slowly progresses over many months, where nerves within the spinal cord gradually lose their ability to transmit impulses. The cause of the nerve degeneration is poorly understood, but it appears to be related to an alteration in the genes of the affected dog. The nerves in the middle of the back (the thoracolumbar spine) tend to be affected initially and from here the degeneration spreads up and down the spine.

What are the common signs of degenerative myelopathy?

The first signs of degenerative myelopathy generally develop at around eight years of age, although the onset may be later in life in some dogs. Weakness and loss of co-ordination in one or both of the hind limbs (back legs) is often the initial sign, followed by dragging and scuffing of the digits (toes). Affected dogs have a drunken appearance and will often stumble and fall when turning, especially on slippery surfaces. As the condition gradually progresses over many months, hind limb weakness and loss of co-ordination increase. In some severe cases the fore limbs (front legs) also become affected and affected dogs can become unable to walk and may develop incontinence. Degenerative myelopathy is not a painful condition and, as a result, affected dogs are generally well and keen to exercise, despite their disability.

How is degenerative myelopathy diagnosed?

The signs of degenerative myelopathy are very similar to many other spinal conditions, such as a 'slipped disc' in the back and slow growing tumours of the spine. As a result, it is not possible to make a diagnosis based on just the age and breed of a dog that is developing progressive hind limb weakness and loss of coordination. Investigations are necessary to rule out the many other conditions that can mimic degenerative myelopathy, so that this condition becomes the most likely cause of the neurological dysfunction.

Radiographs (X-rays) may be obtained but are of limited value since they only show the bones of the spine and not the soft tissues, such as the discs and the spinal cord. A more advanced imaging technique, e.g., an MRI scan, is necessary in order to exclude other conditions, including a 'slipped disc'. Instead of X-rays, MRI uses high powered magnets and a computer to generate images of the spine (this is the same technique and the same equipment which is used for body scanning in human patients). Myelography is an alternative imaging technique which can be used for investigating spinal conditions. This involves injecting a dye (contrast agent) around the spinal cord and obtaining multiple X-rays to assess the flow of the dye, to see if it is interrupted at the site of the slipped disc. Injecting around the spinal cord is not without risk of causing further damage to already compromised nerve tissue, however. MRI is less invasive than myelography with less risk of side-effects, and for most patients MRI provides the best option for investigation. Both MRI and myelography require the dog to have a general anaesthetic. Occasionally it is necessary to collect and analyse fluid that surrounds the spinal cord (cerebrospinal fluid or CSF) in order to rule out inflammatory conditions.

It is possible to ascertain if a dog has a higher risk of developing degenerative myelopathy by analysing the DNA in a sample of blood or a swab taken from the inside of the mouth. This test does not, however, confirm the condition.

How can degenerative myelopathy be treated?

There is no specific medical treatment for degenerative myelopathy, and surgery is not indicated because there is no compression on the spinal cord that can be alleviated by an operation. It is important to keep affected dogs as fit as possible and avoid them being overweight. Regular lead walks on soft surfaces, such as grass, and regular hydrotherapy and physiotherapy are often beneficial. In more advanced cases it may be necessary to protect the paws with 'boots'. Some owners will consider assisting their dog to walk by training them to use a mobility cart; these are commercially available from a number of companies. Dietary supplements, including vitamin E, omega-3 fatty acids, L-carnitine and gamma linolenic acid have all been suggested, but none has been proven to stop or slow the progression of degenerative myelopathy.

What is the outlook for dogs with degenerative myelopathy?

Degenerative myelopathy is a progressive condition with affected dogs gradually becoming incontinent and losing the ability to walk. This typically takes place over a 12 to 18 month period from the time of onset of signs. Unfortunately on welfare grounds it is often necessary to consider putting severely affected dogs to sleep (humane euthanasia).
Why should I bring my dog to Willows for investigation and management of suspected degenerative myelopathy?

It is very important that the correct diagnosis is made, as some patients may have a slipped disc that could require surgery, rather than having degenerative myelopathy.

Our neurology service is led by a team of recognised, accredited Specialists and we aim to provide the best possible care and treatment for your pet in our state-of-the art hospital. Our neurology team works closely with the imaging Specialists who run Willows sophisticated imaging facilities, as well as with expert anaesthesia Specialists and 24-hour veterinary and nursing staff. This combination of exceptional facilities and expertise allows us to provide the most accurate diagnosis and optimal care for any patient with suspected degenerative myelopathy.

We are always happy to discuss any aspects of a case with you or your vet prior to referral.

If you have any queries or concerns, please do not hesitate to contact us.