

Chiari-like malformation and syringohydromyelia (CLM/SM)

What is CLM/SM?

Chiari-like malformation and syringohydromyelia are complex conditions which affect the brain and spinal cord in dogs, and may be found in some brachycephalic ('short-faced') breeds. Chiari-like malformation, a condition characterised by a mismatch in skull and brain size (brain too big and skull too small) is the most common cause of syringohydromyelia in dogs. Nearly all Cavalier King Charles Spaniels will have some level of Chiari-like malformation. Syringohydromyelia is a disorder of cerebrospinal fluid (CSF) which can occur when there is obstruction of flow of the fluid from the ventricles in the brain to the spinal cord. Changes in fluid dynamics causes fluid to be forced into the spinal cord resulting in dilated fluid filled cavities. This damage in the spinal cord can result in neuropathic pain in approximately 40-70% of cases.

What signs are associated with CLM/SM?

Clinical signs can vary widely between dogs and the extent of the syrinx can correlate with the severity of clinical signs. The most common clinical signs are: twisting of the neck (scoliosis), stiff front limb gait, scratching of the neck and shoulder region, intermittent and unprovoked neck pain, atrophy of the neck muscles, weakness or lameness of the front limbs. Clinical signs tend to appear with age and they can be progressive in more severe cases, but can be subacute in some cases. Some dogs may present with syringohydromyelia on MRI and not show any clinical signs.

How do we diagnose CLM/SM?

The best way to diagnose CLM/SM is by means of MRI scanning as it provides the most detailed information on the brain, spinal cord and structures of the neck.

What is the treatment for CLM/SM?

Chiari-like malformation and syringohydromyelia can be a very painful disease and control of the clinical signs can be challenging. Typically, lifelong medication is required and the problem can be progressive in many dogs meaning that medication may need to be increased to control their signs. A small proportion of dogs undergo surgery to treat their condition although the outcomes can be mixed and clinical signs can often recur. Depending on the severity of the neurological signs and the age of the patient, medical treatment is usually recommended in the first instance. The most common drugs used are an anti-inflammatory and gabapentin which can help with neuropathic pain associated with syringohydromyelia. The prognosis for CLM/SM is extremely variable between dogs and treatment is intended to manage clinical signs and slow the course of the disease. A complete recovery is unlikely to occur due to the underlying condition and structural damage to the spinal cord.