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Caudal Occipital Malformation Syndrome (COMS)

What is COMS?

Chiari-like malformation (CM), also referred to as Caudal Occipital Malformation Syndrome (COMS), is defined by a difference in growth between the brain and the skull. The cavity of the skull is insufficiently sized, causing the posterior part of the brain (including the brain stem and cerebellum) to be pushed into the foramen at the back of the skull, which hinders the flow of cerebrospinal fluid. COMS is a common disorder found in toy and small dog breeds such as the Cavalier King Charles Spaniel, Papillion, Brussels Griffon, Yorkshire Terrier, Affenpinscher, Maltese, Boston Terrier, Chihuahua, Pomeranian, Pug, and French Bulldog.

What are the Symptoms of COMS?

COMS modifies the circulation of cerebrospinal fluid between the skull and the spinal column, leading to an accumulation of fluid within the spinal cord, a condition referred to as syringomyelia. The most clinical symptom is intermittent pain accompanied by behavioral indicators: spontaneous vocalizations or signs of discomfort when moving or being lifted, hesitance to engage in physical activity, scratching at the neck without making contact (phantom scratching), frequent face rubbing, excessive paw licking, or heightened sensitivity to touch on one side of the neck, ear, shoulder, and/or chest. Additionally, syringomyelia can lead to weakness and impaired coordination, as well as a delayed response in correcting abnormal limb positioning. A definitive diagnosis requires advanced imaging, such as an MRI.

Are there Treatment Options?

There are various medical strategies available for the treatment of COMS. Medications such as furosemide or omeprazole are utilized to decrease cerebrospinal fluid pressure. Neuropathic pain relievers like gabapentin or pregabalin can significantly alleviate pain and distressing behaviors, including phantom-scratching. Anti-inflammatory drugs, including steroids and non-steroidal anti-inflammatories, may also be used to address pain and mobility issues if they arise. Surgical intervention is indicated for treatment as well, but it is typically reserved for cases that do not respond to medical therapy.

The most frequently performed surgery is cranial/cervical decompression, which restores CSF flow by removing the bone at the rear of the skull and a portion of the uppermost vertebra. This surgical procedure is effective in alleviating pain and enhancing neurological deficits in approximately 80% of cases; however, around 50% of patients may experience a recurrence of symptoms within two years, and the syringomyelia often remains unresolved.

What is the Prognoses of COMS?

Chiari-like malformation and syringomyelia can cause considerable pain. Long-term medication is usually necessary and may need to be modified over time to manage symptoms. While most dogs maintain their ability to walk, some may experience notable weakness. Most owners indicate that their pets are able to enjoy a satisfactory quality of life.