

Tremor Syndrome

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BASIC INFORMATION

Description

Tremor syndrome is a disorder caused by mild inflammation of the covering of the brain and spinal cord (*meninges*) that produces fine tremors of the head and whole body. Tremor syndrome tends to affect young (1-5 years of age), small-breed dogs. Typical breeds affected include the Maltese, poodles, and West Highland white terrier. Tremor syndrome has been called “little white shaker disease” because it seems to be most common in small breed dogs with white hair coats; however, any dog can be affected, regardless of size and coat color.

Causes

The tremors are caused by inflammation of the covering of the brain and spinal cord, but an underlying cause has not been found. The inflammation may be caused by an immune-mediated process in which the animal’s own immune system attacks the meninges, leading to inflammation (*meningitis*).

Clinical Signs

Head and body tremors are the predominant clinical signs. The tremors appear as fine shaking movements similar to shivering. They typically increase in severity during excitement and lessen with rest. Tremors are absent during sleep. Some dogs also have a high-stepping, uncoordinated gait, abnormal eye movements, and (rarely) seizures. Dogs with severe generalized tremors may have difficulty walking.

Diagnostic Tests

History and neurologic examination findings are important in the initial diagnosis of tremor syndrome. Routine blood tests (such as a complete blood count and biochemistry profile) and a urinalysis are usually normal or may suggest inflammation.

Advanced imaging of the brain may be performed using magnetic resonance imaging (MRI) or computed tomography (CT scan). Although the MRI is usually normal in dogs with tremor syndrome, imaging of the brain rules out other neurologic diseases that can produce similar clinical signs.

Cerebrospinal fluid (CSF) evaluation is important in the diagnostic work-up, and the fluid is obtained via a spinal tap. Animals with tremor syndrome have evidence of inflammation in their CSF, with increased numbers of white blood cells called *lymphocytes* and elevated protein levels.

TREATMENT AND FOLLOW-UP

Treatment Options

Tremor syndrome is treated with steroids. Initially, steroids are given at a high dose to suppress the immune system and decrease inflammation. The tremors usually decrease or stop within a few days to weeks after therapy is started, but medication is continued for several months to prevent a relapse. Over time, the steroid dose is tapered slowly in an attempt to wean the animal off the therapy or to find the lowest dose necessary to control the clinical signs.

Follow-up Care

Patients typically are re-evaluated every few weeks initially, to monitor for resolution of the tremors. Additionally, recheck appointments may be scheduled every few weeks while steroids are tapered to monitor for recurrence of clinical signs.

Prognosis

Prognosis for recovery is good. Tremors stop in most animals shortly (1-3 days) after initiating therapy. However, some dogs relapse when the medications are tapered or discontinued and require lifelong treatment to control the tremors.