

Idiopathic Head Tremors

“Idiopathic” means that we do not know or understand the cause. The most commonly affected breeds are the English bulldog and the Doberman pinscher, but other dogs can be affected.

At least three theories have been proposed as to the development of the tremors.

- 1) They may represent a partial seizure.
- 2) They are a form of dyskinesia. This is a movement disorder that involves involuntary movements.
- 3) They may be an abnormality of the stretch receptor reflexes in the head. This theory may explain why the head tremors temporarily stop when you get the animal's attention. For example, when the animal looks directly at something, the neck muscles tense, and this may release the stretch mechanism that is provoking the tremors.

Symptoms

Symptoms consist predominantly of episodes of head tremors that last for variable amounts of time. Affected dogs are fully alert during the episodes. The head tremors may occur in a vertical (up and down like shaking the head "yes") or in a horizontal (back and forth like shaking the head "no") direction. Rarely, one dog can have tremors in both directions. The tremors seem to start and stop spontaneously, and may stop abruptly when the dog's attention is drawn to something during an episode. The tremors are not associated with other neurological problems, such as seizure activity.

Doberman Pinscher². In the Doberman pinscher the tremors are believed to be inherited but the inheritance pattern has not been worked out. Two forms were identified, a familial early-onset form (age <1 year) that affected littermates and a less predictable form. Certain triggering conditions (e.g. surgery, coming into heat, illness, medications, etc.) were identified in a few dogs.² All affected dogs could be linked back to a single sire.

English Bulldog¹. In most cases, the underlying cause is unknown. In a survey involving this breed, up to 38% of owners reported some form of head movement disorder in their dogs. Tremors began early in life and occurred in vertical or horizontal directions. Episode numbers, frequency, and duration were highly variable. Most episodes occurred while the dog was at rest and some appeared to be triggered by stress. In 50% of the dogs, the tremors eventually disappeared.

Diagnosis

Diagnostic evaluation, including MRI and spinal fluid analysis, is typically normal. Nevertheless, if the dog develops any persistent neurological deficits, then a thorough workup is recommended. Symptoms usually begin as a puppy or young adult.

Treatment

No treatments have been beneficial to date. The tremors are nonlife-threatening and may be more of a nuisance to the owner than to the dog. Response to antiepileptic drugs has been mixed. Symptoms are not progressive and often improve about 50% of the time in the bulldog, so monitoring is not usually necessary unless changes are seen. Prognosis is good.

Other Conditions that can Resemble Idiopathic Head Tremors

Corticosteroid-responsive tremors: Mild tremors of the head, trunk, and limbs occurs most often in young, white, small breed dogs, and responds to treatment with prednisone.

Canine distemper-induced chorea: these are rhythmic jerking movements that develop due to nerve damage after infection with canine distemper virus. These types of tremors are not necessarily limited to the head, and often get worse with time. Some become so severe that they are uncontrollable.

Encephalitis: infection or inflammation of the brain caused by autoimmune disease, bacteria, viruses, parasites, etc. These animals are often very ill, and if untreated tend to get worse with time.

Hypocalcemic Twitches: muscle spasms caused by low calcium. This can be detected on routine bloodwork.

Hypomyelinogenesis: Various disorders of myelin (the protective layer around the nerves) can result in congenital (present at birth) tremors that involve not only the head but other parts of the body.³

Toxins: Toxicities, such as hexachlorophene, metaldehyde (slug bait), mycotoxins (fungal toxins), organophosphate pesticides, caffeine, amphetamines, cocaine, etc.

Essential tremors of aging dogs – due to degeneration of the nervous system with age (a form of senility).

Cerebellar-related intention tremors – These head tremors are usually side to side and get worse as the dog focuses its attention on something rather than better.

References:

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