

Sudden onset head tilt - idiopathic peripheral vestibular disease

What is idiopathic vestibular disease?

The vestibular system regulates balance, proper head position, and normal eye movements and is located both in the inner ear and the brain. Idiopathic peripheral vestibular disease is a disorder affecting dogs and cats which is typified by a sudden loss of balance, a head tilt, tendency to fall or circle in the same direction, and abnormal eye movements referred to as *nystagmus*. Both dogs and cats can be affected by idiopathic peripheral vestibular disease. Affected dogs tend to be older (greater than 7 years of age). Sometimes the disease is referred to as “old dog” (or geriatric) vestibular disease. The disease affects cats of any age.

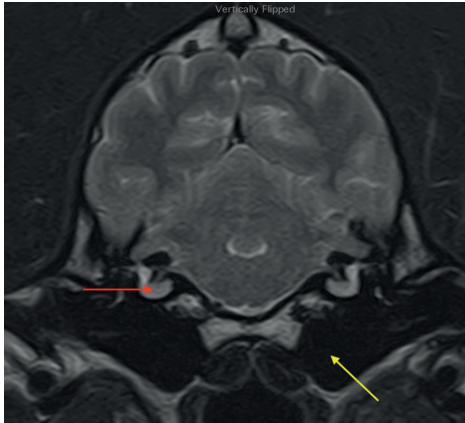
What are the clinical signs (symptoms)?

Onset of clinical signs is sudden and severity can vary from mild to severe. Animals typically tilt their head to one side giving the appearance of listening to the ground. Affected animals may have abnormal eye movements in which the eyes tick side to side referred to as *nystagmus*. Additionally, they may fall, stumble, and circle to the same side as their head tilt. Affected dogs and cats may have an uncoordinated gait and appear imbalanced. Severely affected animals may try to continually roll and may be unable to walk. Additionally, affected animals may be nauseous, not eat, and vomit. Importantly, no additional neurologic abnormalities are seen in conjunction with idiopathic peripheral vestibular disease.

What causes idiopathic vestibular disease?

The term “idiopathic” indicates that the cause of a condition is unknown; in the case of vestibular dysfunction, this is commonly the case. Possible causes for vestibular dysfunction include: autoimmune inflammation, infection (including inner ear infection and brainstem abscess), cerebrovascular accident (stroke), neoplasia (cancer), nasopharyngeal polyps, metabolic disorders, thiamine deficiency, and antibiotic toxicities. In the case of idiopathic vestibular disease, these possibilities are ruled out to the best of the clinician’s ability.

How do you make a diagnosis?



MRI of a normal dog clearly shows a normal inner ear structure where the vestibular system is housed (red arrow) and the middle ear cavity full of air (yellow arrow).

Diagnosis is based on the history, examination findings, and exclusion of other diseases that may produce similar clinical signs. The other causes of vestibular diseases (see above) must be investigated before the diagnosis of idiopathic peripheral vestibular disease can be made. Careful inspection of the ears (otoscopy) should be performed in affected animals. Examination of the ear canal by computed tomography (CT) imaging or magnetic resonance imaging (MRI) of the inner ear and brain are normal in animals with idiopathic peripheral vestibular disease.

What are the treatment options?

There is no specific treatment for this disease. However, some symptomatic treatments include ondansetron, maropitant and meclizine. Affected animals usually show signs of improvement within 1-3 days.

Severely affected animals may initially require hospitalization to receive intravenous fluid therapy and anti-nausea drugs. Most affected animals will be able to recover at home with the benefit of anti-nausea drugs, appetite stimulants and medications to prevent vomiting.

Complete recovery may take several weeks, and some animals may have a persistent head tilt. Typically, long-term follow up is not necessary once clinical signs have resolved.

What is the prognosis?

Prognosis for recovery is excellent; however, a head tilt may remain life-long. Idiopathic vestibular disease rarely recurs.