

# Nursing the vestibular patient

**Vestibular disease is one of the most common neurological cases that present in general practice and should also be considered as one of the most difficult and demanding cases when it comes to veterinary nursing, writes Lorraine McDonnell RVN**

The vestibular system is essential in maintaining balance and preventing an animal from falling over. It does this by holding and adapting the position of the eyes, head and body with respect to gravity. With vestibular disease, the patient's orientation and balance are impaired. This can lead to dramatic and distressing neurological signs, including head tilt, falling, leaning, rolling, circling, abnormal nystagmus and ataxia.

Vestibular disease can have many causes, for example, infections within the inner and middle ear, tumour or trauma.

Drug reactions can also be toxic to the ear, (eg. gentamycin and amikacin). This is why it is important to get a thorough history from the client on all medications prescribed by another vet, or any medications administered by the client themselves.

Vestibular disease can be classified as either peripheral or central. Peripheral vestibular disease mainly affects the inner ear causing irritation to the nerves, which connect the inner ear to the brain (vestibular nerve), whereas central vestibular disease involves the central nervous system.

In any case, it is important to be able to distinguish between a central 'vestibular episode' and a 'cerebrovascular accident' (stroke), as both conditions display very similar clinical signs. Vestibular disease mainly affects the inner ear (peripheral vestibular disease), or brainstem and cerebellum (central vestibular disease), whereas a stroke affects blood flow to the part of the brain.

In this article we will deal with peripheral vestibular disease, and focus mainly on idiopathic vestibular disease. This syndrome is common in adult cats and dogs, particularly geriatric animals.

Clinical signs are usually sudden and severe in onset, with no underlying cause detected. Patients can present to the clinic with:

- Ataxia, loss of balance, falling and stumbling;
- Circling (usually to the side affected);
- Head tilt;
- Nystagmus – this usually occurs at the early stage of peripheral vestibular disease. If unilateral vestibular disease, then the eye on affected side (or both) may develop nystagmus. Nystagmus can help us differentiate between central and peripheral disease. Horizontal and rotatory nystagmus can be seen in either condition, however vertical and positional nystagmus is exclusively seen in central vestibular disease;
- Dizziness can cause symptoms of motion sickness to the dog;
- Excessive drooling can be due to nausea; and
- Vomiting due to motion sickness caused by dizziness.



**Figure 1: Head tilt from vestibular episode.**



**Figure 2: Mild head tilt seven weeks post-vestibular episode.**

Once a dog is admitted, a full physical examination, followed by a neurological examination, must be carried out. An otoscope exam to assess for ear disease, and possible radiographs of the skull to assess the tympanic membrane of the middle ears should also be advised. Swabs for culture may be taken to rule out infection. Diagnosis is based on a complete history from the owner in conjunction with findings from the various exams carried out. Further diagnostics tests like computed tomography (CT) and magnetic resonance imaging (MRI), may be used to rule out any abnormalities like neoplasia.

## NURSING THE INPATIENT

Once the dog's tests have been completed it is now important to set up a comfortable and safe environment for the neurological dog. When no underlying cause can be found, supportive care is required if dog is unable to walk or eat on its own, or if dog

is still ataxic and disorientated.

Intravenous fluids may also be required if patient is nauseous and unable to eat or drink. Ensure that the drip line is secured well to the leg to try and avoid the dog tangling itself up in line. Dogs must be monitored closely during their stay.

Antiemetics can be administered in order to counteract nausea.

Try and keep the dog in an area that is as stress-free, even covering certain parts of the kennel door, so that the dog cannot see other dogs, but staff can see in and monitor.

Dogs may, depending on the severity of symptoms, need extra attention and careful monitoring with the following:

- Hand feeding in small amounts at first;
- Water must be offered regularly and water bowls removed in the initial 48-72 hours. The patient may be unable to stand and therefore, prefer to lie and drink from their bowl. If this is the case, dogs need to be monitored closely as they may easily submerge their noses into the bowl. However, if more stable, it may be necessary to lift the water bowl to them in order to drink;
- Additional padding in the kennel is necessary in order to prevent any additional injury, and extra pillows and duvets can be used to keep the patient in a sternal position;
- If facial paralysis presents, regular lubrication of the eye must be maintained;
- If very ataxic, the dog may need some additional aid in walking. This can be achieved by simply using a towel or sling under the abdomen. Care must be taken with the abdomen as not to cause any injury. If ataxia is less severe or improving then aiding them by simply supporting at the shoulders should be sufficient;
- Patient comfort and keeping them clean is very important, especially with excessive drooling, or if they are having trouble getting out to go to the toilet;
- Ensure extra toilet breaks if on intravenous fluids.

The dog's clinical signs will usually considerably improve in the first 72 hours.

## HOME CARE

It is important to educate clients on all aspects of home

care before a dog has been discharged from the practice. It helps to start talking with clients within the first forty-eight hours in what to expect and the aftercare expected at home. This helps clients to adjust to the new routine and also gives them time to adjust living space in accordance to their dog's needs.

One of the most important things to tell owners is that their dog is kept in a quiet area with least amount of activity especially from constant traffic from people and children. It is important to keep any movement to a minimum until the dizziness has subsided.

In the dog's environment, owners need to ensure there should be no high bedding for dogs to sleep on as they may stumble getting into bed and therefore possibly injure themselves.

Leaving appropriate lighting on is crucial for visualisation especially at nighttime.

If the patient has already been trained to a crate, feels secure and comfortable and is not stressed, this can help to keep patient quiet and avoid trauma. However, if the patient has never been trained to a crate, then do not suggest they start using it now.

Ensure you tell the clients as they may do, and inadvertently causing excess stress to the dog. Encourage owners to assist the dog walking to and from the toilet rather than just carrying them. It will help to regain patient motion, and help reduce muscle wastage.

Show owners the correct method in using a towel/sling (as not to cause abdominal injury).

Due to ataxia/stumbling/falling, it may be best to confine the patient to a small room that does not contain many objects/furniture that they may injure themselves on. Child proofing the room by placing foam sponges on sharp edges of coffee tables, tidying away any cables/leads to avoid dog tripping on them. Perhaps placing a child gate at base of stairs or into room they do not wish the dog to enter.

It is important to reiterate to clients to take it day by day as there is no set time frame for recovery. After seven to 10 days, the patient may improve drastically, but there may be lasting effects, eg. head tilt, facial paralysis, which may take weeks to months to recover, or it may never resolve. Owners need to be reminded that this may be very frustrating, but progression cannot be rushed.

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