

## Tricuspid Dysplasia

Tricuspid valve dysplasia (TVD) is an uncommon condition in dogs and cats where the tricuspid valve has not formed properly at birth (also known as a congenital abnormality). The malformed valve allows backflow of blood from the right ventricle (lower chamber) to right atrium (upper chamber), causing a noise which we can hear with a stethoscope, called a **murmur** (“whooshing sound”) which is usually present from birth.

As the leak worsens, the right atrium and ventricle become enlarged and eventually the increasing pressure in the circulation may cause fluid to build up in the abdomen (ascites) and around the lungs (pleural effusion). The patient would now be described as having congestive heart failure.

Dogs with TVD **should not be bred** as it is likely to be genetic and may be passed on to the next generation. It most commonly affects Labrador retrievers, but is also reported in Mastiffs/Dogues de Bordeaux, Boxers, Bulldogs and German Shepherd dogs.

Animals may appear to be completely normal, or may show the following **clinical signs**:

- Reduced exercise ability, slowing down or collapsing after exertion.
- Swollen tummy, laboured breathing

### **How is it diagnosed?** Echocardiography (cardiac

**ultrasound scan)** is the gold standard diagnostic test,

allowing real time measurements of heart size,

assessment of the valves, and colour mapping to show

any leaks. It is painless and non-invasive, and may not even require sedation. A small amount of hair clipping is usually necessary.

An **ECG (electrocardiogram)** may be needed if there is also an irregular heart rhythm, and occasionally we may record this over 24-hours using a **Holter monitor** (portable ECG recorder). Some dogs with TVD are prone to bursts of fast heart rhythms, like palpitations and this can cause added strain on the heart.

**Can it be treated?** We can start medication to support the heart function if the heart is enlarged. Diuretic treatment can help to remove fluid build-up in the lungs. Occasionally, surgery may be possible (in dogs) to improve the function of the valve for the longer term. This is open heart surgery (under heart bypass) and is only performed at a small number of specialist centres in the world. Please contact us for more information if you may be interested in pursuing this.

**How can I monitor my pet at home?** Dogs with mild disease can enjoy walks as normal and there is no need to change their diet. Dogs with more advanced disease can still go for walks, but do not over-exert them; allow breaks and carry extra water if needed. Cats can be treated as normal at home.

Monitoring for deep/laboured breathing pattern is useful, or a swollen tummy. Measuring your dog’s waist with a tape measure just behind the ribs can help to monitor this. Please contact your own vet immediately if your pet develops sudden breathing difficulties, swollen tummy, fainting or collapse.

**Your vet will be able to assess and stabilise your pet and can then contact us for advice.**

