

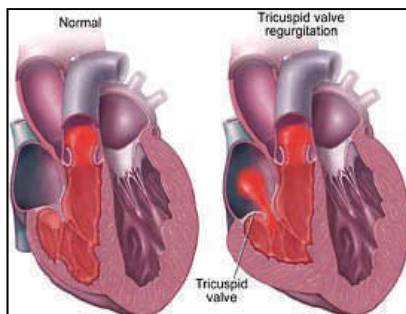
Tricuspid Valve Dysplasia

What is Tricuspid Valve Dysplasia?

Tricuspid valve dysplasia (TVD) is a congenital heart defect, which is a defect in the structure of the heart present since birth. TVD is a malformation in the valve on the right side of the heart (see picture on the right). TVD is most commonly seen in Labrador retrievers, but can also be seen in many breeds of dogs including Borzois, German shepherd dogs, and Boxers. Other large breed dogs are also affected.



The tricuspid valve is located between the right atrium and right ventricle and allows a “one-way” blood flow from the heart into the lung circulation. When this valve is malformed, backflow of blood from the ventricle into the atrium (regurgitation) may occur.



courtesy of The Mayo Clinic (www.mayoclinic.org)

Minor tricuspid valve malformations may result in a small amount of regurgitation that can be compatible with a normal life. However, when the valve is severely malformed and accompanied by a large amounts of regurgitation, the clinical consequences can be severe.

How is TVD diagnosed?

In most cases, the blood turbulence associated with TVD can be heard by the veterinarian on chest auscultation during the exam for the first vaccination. However, some cases of TVD may present with a silent murmur and therefore this abnormality can be initially missed.

Echocardiography performed by a cardiologist is the most reliable way to definitively diagnose this disease and determine the severity of the regurgitation.

What are the consequences of TVD?

Clinical signs correlate with the severity of the defect. Small defects can be compatible with a full normal lifespan. However, severe tricuspid regurgitation can lead to volume overload of the right heart, dilating the right ventricle and atrium. Pulmonary blood flow may be decreased, resulting in exercise intolerance and rapid breathing. As the pressure in the right atrium increases, venous return is impaired, causing liver congestion and accumulation of fluid in the abdomen (ascites).

What is the prognosis of TVD?

Some dogs can live many years with tricuspid valve dysplasia if they are only mildly affected based on echocardiographic findings. These dogs may need to take certain precautions such as avoiding repeated periods of prolonged exercise or exposure to extreme temperatures. Dogs with a more severe disease will need more intensive care at home. These dogs may only live for a few months after diagnosis, even if they seem perfectly normal at the time of diagnosis.

What Happens Next For Me and My Dog?

As an owner of a dog with TVD, it is important to monitor your pet closely for signs that are suggestive of disease progression. It is a good idea to keep a daily journal and put in it both observations of your pet's behavior as well as resting respiratory rates. If you notice exercise intolerance, fainting/collapsing episodes or difficult breathing, please contact your primary veterinary surgeon. Also, if you notice signs of abdominal distension, which is due to fluid build up in the abdomen, please contact your vet, who may need to see your pet right away, as these may be signs that your dog is developing congestive heart failure.

The only definitive cure for TVD is valve replacement surgery, which is very expensive and only currently available at a few veterinary institutions. Please do not hesitate to contact your vet if you would like to discuss this option.

Congestive heart failure is a secondary condition that will require medications and regular check ups with your vet. In some cases, the abdominal fluid needs to be manually drained by your vet in order to provide some pressure relief and improve the dog's quality of life. Unfortunately, with time, treatment of congestive heart failure may become ineffective and euthanasia should be considered in case of poor quality of life.

Because TVD is a possible inherited disease, we always recommend not breeding your pet. You should contact the breeder of your pet if known so other littermates can be examined.

This handout provides a general overview on this topic and may not apply to all patients.

Please do not hesitate to contact us if you require any additional information. (www.cardiospecialist.co.uk)