

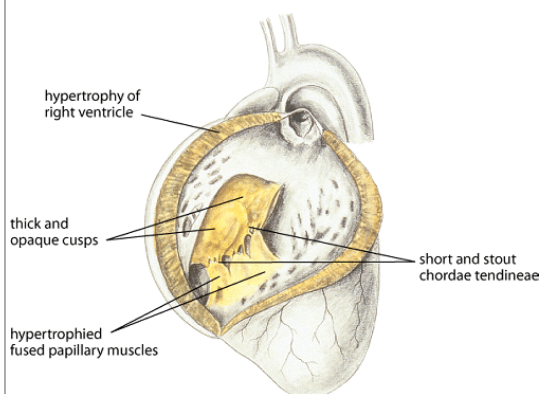
# Tricuspid Valve Dysplasia

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Congenital malformation of the tricuspid valve complex is seen in dogs and cats. Breeds predisposed are Labrador Retrievers and German Shepherds. Tricuspid dysplasia results in tricuspid insufficiency and systolic regurgitation of blood into the right atrium. Rarely, tricuspid valve stenosis can be noted. Chordae tendineae are commonly shortened or absent, and tricuspid valve leaflets may be thickened or adhered to the ventricular or interventricular septal wall. Other concurrent congenital anomalies such as mitral valve dysplasia, septal defects, subaortic stenosis, or pulmonic stenosis may be present. In Ebstein anomaly, a variant of tricuspid dysplasia, the tricuspid valve is displaced toward the cardiac apex.

## Tricuspid valve dysplasia, dog

Tricuspid valve dysplasia, dog. Illustration by Dr. Gheorghe Constantinescu.



## Pathophysiology:

Malformation of the tricuspid valve results in significant valvular insufficiency. Chronic tricuspid regurgitation leads to volume overload of the right heart, dilating the right ventricle and atrium. Pulmonary blood flow may be decreased, resulting in fatigue and tachypnea. As the pressure in the right atrium increases, venous return is impaired, causing signs of right heart failure (ascites, jugular venous distention, and possibly pleural effusion).

## Clinical Findings and Treatment:

Clinical signs correlate with the severity of the defect. Affected animals may display signs of right-side CHF. A holosystolic murmur of tricuspid regurgitation is prominent at the right cardiac apex. Atrial arrhythmias, especially paroxysmal atrial tachycardia, are common. Electrocardiography and radiography typically demonstrate right ventricular and right atrial enlargement. The caudal vena cava may be significantly enlarged. Echocardiography demonstrates malformation of the tricuspid valve and varying degrees of right atrial and ventricular dilatation. Doppler echocardiography demonstrates tricuspid regurgitation.

Prognosis for animals with clinical signs is highly dependent on the severity of disease and the degree of tricuspid regurgitation. For dogs with right heart failure, CHF therapy and periodic abdominocentesis may be needed to control peritoneal effusion.