JOONDALUP CENTRAL
VETERINARY HOSPITAL
DR. ROBERT ADAMS BSC. BVMS & ASSOCIATES
UNIT 2, 1 WINTON ROAD JOONDALUP WA 6027
PH: (08) 9300 2322
WWW.JOONDALUPVET.COM.AU
JASMAR NOMINEES PTY LTD ABN: 67 126 253 567

COLLAPSED TRACHEA

What is a collapsed trachea?

The trachea, also known as the windpipe, is an important structure which connects the throat to the lungs. It serves the purpose of directing air into the respiratory tract.

The normal trachea is tubular. It maintains its shape because of a series of rings made of cartilage. These rings do not completely encircle the trachea. They are 'C' shaped and run from 2 o'clock to 10 o'clock. The remainder of the trachea is composed of a flexible membrane that joins the ends of the cartilage rings. (Tie the tips of the C).

When the cartilage rings are flattened from the top to the bottom, the trachea is said to be collapsed. Rapid inhalation of air can cause the trachea to flatten and make it difficult for air to enter the lungs.

Why does it happen?

We do not completely understand how this condition develops. However, we know that these dogs have an abnormality in the chemical makeup of their tracheal rings. The rings loose their stiffness so they are not able to retain their circular shape. We also know that it occurs in certain breeds of dogs, notably Chihuahuas, Pomeranians, Shih Tzus, Lhasa Apsos, Toy Poodles, and Yorkshire Terriers. Because of that, we suspect that there is a genetic factor involved.

What are the clinical signs?

The most common clinical sign is a chronic cough. It is often described as dry and harsh and can become quite pronounced. The term "goose honk" is often used to describe it. Coughing is often worse in the daytime and much less at night. The cough may also begin due to excitement, pressure on the trachea (from a leash), or from drinking water or eating.

How is collapsed trachea diagnosed?

A dog of the breeds listed above with a chronic cough, especially a "goose honk" should be suspected as having collapsed trachea. Often very light pressure over the trachea during the physical examination can raise a suspicion of collapsed trachea in a small dog with a persistent dry cough. While the information gained from the physical examination is helpful, other tests are needed to confirm this condition.

Radiographs (x-rays) of the chest can identify the trachea and its shape. However, a collapsed trachea changes its diameter during the respiratory cycle. It is usually collapsed during inhalation and normal during exhalation. Therefore, we attempt to visualise the trachea during both phases of respiration. This best achieved with fluoroscopy - a machine which makes a ‘radiographic video’ and allows us to view the trachea throughout inspiration and expiration.

Endoscopy is another way to visualise the trachea. An endoscope is a tube that is small enough to insert into the trachea; the operator can see through it and visualise the inside of the trachea. By watching the trachea during inspiration and expiration, abnormal collapsing can be seen. Unfortunately, tracheal endoscopes and fluoroscopes are expensive and not available at every veterinary practice.

Isn't coughing also a sign of heart failure?

Yes, it is. Many dogs with collapsed trachea will also have heart disease. The heart is usually evaluated when carrying out the tests to diagnose a collapsed trachea. Treatment for heart disease is not indicated unless an abnormality is demonstrated.

How is it treated?

At present, collapsed trachea is best treated medically. Some dogs respond well to bronchodilators and various types of anti-inflammatory drugs. The trachea of these dogs is easily infected, so antibiotics are usually part of the treatment. If obesity is present, weight loss is often beneficial. Excitement and vigorous exercise are likely to cause a relapse, so they should be avoided as much as possible.

Some dogs respond well to the medical approach, and others do not. Because medical therapy only treats the symptoms and does not correct the problem, these dogs are always subject to recurrences of coughing and breathing difficulty.