



Megaesophagus

The oesophagus (gullet) is the tube that carries food from the mouth to the stomach. Most diseases that affect the oesophagus lead to widening of the tube hence the term ‘mega’ (meaning large) oesophagus. Megaesophagus is seen more often in dogs than cats.

What is megaesophagus?

Megaesophagus (ME) is an enlarged or stretched oesophagus. The function of the oesophagus is to transport food from the mouth to the stomach. The oesophagus has muscles in its walls and these muscles contract to push the food along the oesophagus into the stomach. These muscle contractions ‘*oesophageal motility*’ are required for moving food and liquid down to the stomach. If the muscles of the oesophagus are weak or not functioning well, food is not pushed down to the stomach but instead pools in the oesophagus stretching its walls and creating pouches. The food or liquid within these pouches may remain in the oesophagus for long periods of time but is usually eventually regurgitated.

How would I know if my pet has megaesophagus?

The classic presenting clinical sign of ME is 'regurgitation'. Regurgitation is the passive return of food (often in a sausage shape) or saliva ('whipped egg whites'), often many hours after eating. Regurgitation is very different from vomiting which is an active process accompanied by forewarning signs such as nausea, quick and repeated contractions of the abdomen and rhythmic retching. Animals with severe oesophageal problems may not be able to ingest (and retain) sufficient calories so weight loss, wasting and failure to grow in puppies are common signs.

When food returns up the oesophagus during regurgitation the normal protective reflexes are not initiated and, food may accidentally enter the airway. Food in the airways can result in aspiration pneumonia, so breathing difficulties, fever and coughing may be seen in dogs with ME. Aspiration pneumonia can be life-threatening and therefore preventing aspiration pneumonia is very important. If you suspect your pet has aspirated something you should immediately contact your vet for advice.

Sometimes in animals with ME gurgling and sloshing of oesophageal contents can be heard.

What causes of megaesophagus?

Megaesophagus may occur when there is a physical obstruction of the oesophagus. This is most commonly seen in puppies with an abnormal development of the vessels close to the heart - a so called 'vascular ring anomaly'. These blood vessels can form a tight band around the outside of the oesophagus that means the tube is narrowed. Often liquids can pass through the narrowing but there is a complete obstruction to food so the problem may first be noticed when puppies are weaned onto solid food.

Megaesophagus can also be seen in generalised diseases that cause muscle weakness, such as some hormone deficiencies, eg hypothyroidism (under-active thyroid) or Addison disease (abnormal adrenal gland function) or irritation of the lining of the oesophagus (oesophagitis). Diseases of the nerves, the nerve-muscle junction (myasthenia gravis) or the muscle of the oesophagus form the final group of causes.

Often a definitive cause is not proven and in these cases the condition is called 'idiopathic' ME.

How will my vet diagnose megaesophagus?

If your vet suspects your dog may have a megaesophagus they will want to do an X-ray to confirm this. X-rays will need to be obtained without sedation or anaesthesia to avoid misdiagnosis because when normal animals are sedated the oesophagus can become enlarged. Abnormal oesophageal function may be studied by real-time X-rays (fluoroscopy), where a food containing dye that shows up on X-rays is administered and moving pictures are obtained of the food moving inside the oesophagus. Endoscopy may be indicated to determine whether there is irritation to, or obstruction of, the oesophagus or any other gastrointestinal disease is present.

Further tests will be needed to investigate the underlying cause and to determine if any complications caused by ME are present. Blood tests look for generalised disease and evidence of response to infection. A blood test for myasthenia gravis (a disease of the nerve-muscle junction) is often indicated. Other more specific tests can be done if muscle disease is suspected eg EMG (testing for abnormal electrical activity) or, in some cases, muscle and nerve biopsy.

Can megaesophagus be treated?

If a specific disease is diagnosed, then this should be treated. Physical obstructions such as vascular ring anomaly may be surgically treated in some cases. Complications of ME such as aspiration pneumonia should also be treated.

Unfortunately, even if the underlying cause of the ME is treated, normal oesophageal function may not return. The mainstay of management is feeding to minimise the potential for regurgitation. The principle is to allow gravity to push food and water down the oesophagus. Some vets advocate feeding from raised bowls but probably feeding from a much greater height is preferable. This can be achieved practically either by feeding your dog with his front paws on a step or having your dog sitting in the 'beg position' while eating. The latter can be easily achieved with a specifically designed chair called the Bailey Chair (<https://www.baileychairs4dogs.com>) which you can build for your dog. Once your dog has finished eating holding them upright for 10 to 15 minutes after feeding also helps to ensure all the food moves down into the stomach. Fluids must also be consumed in the

vertical position.

Finding the right food and consistency is also important in the management of ME. Some pets cope best with a 'slurry' type preparation of food, whereas others are better with more solid food such as hand-moulded balls of tinned diet. Trial and error is the only way to determine what works best for your pet.

In some circumstances, eg before surgical management in an animal that is too thin for an operation, a by-pass of the oesophagus may be needed. This allows food to be placed directly into the stomach so that adequate nutrition can be provided without risk of regurgitation. If the oesophageal disorder is permanent and it is not possible for the animal to take in enough food by mouth, placement of a permanent gastrostomy feeding tube can be considered; however this is huge longterm commitment and the success rate is not high.

Conclusion

Megaoesophagus is a very serious condition which can have life threatening complications. Early investigation and treatment is important because often changes to the oesophagus cannot be reversed. It is important therefore to get treatment early whilst there is still oesophageal function left.