wepharm Animal Welfare

Gastroesophageal Reflux in Dogs and Cats

A common condition that can be silent...

WeGastro®

Gastric relief and Protection

Gastro-esophageal reflux (**GER**) occurs when the mechanisms for its containment are insufficient, allowing gastric contents to flow back into the oesophagus under non-physiological conditions. Acid reflux has long been considered the main trigger for oesophagitis in episodes of **GER**. Acid reflux on its own is harmful, however, it is known that when associated with bile acids (non-acid reflux) it can be even more harmful due to the toxic synergism of gastric and duodenal secretions (GALATOS et al., 2001).

The gastro-oesophageal sphincter (GES) establishes the junction between the oesophagus and the stomach, acting as a high-pressure zone to ensure unidirectional flow into the stomach, thus preventing GER. Among the anatomical mechanisms for preventing GER in addition to the EGE are the distal portion of the oesophagus, the rough gastric folds, the diaphragmatic ridges, the oblique angulation of the distal oesophagus and intra-abdominal oesophageal compression by the fundus when the stomach is distended.

The GES opens and closes in response to neuronal activity (vagal tone) associated with the Swallowing mechanism. Certain drugs such as acepromazine, atropine, diazepam, xylazine, halothane and isoflurane decrease GES pressure and tone, while metoclopramide, cisapride, betanecol, erythromycin and domperidone increase sphincter pressure (Tams, 2003).

Under physiological conditions, a small amount of reflux can occur (TAMS, 2005) due to transient and short-lived episodes of **GES** relaxation. In these circumstances, the mechanisms of secondary peristaltic contractions, local mucosal protective factors and the neutralisation of the acidic environment by swallowed saliva, which is rich in bicarbonate, manage to prevent the development of esophagitis.
The most reported cause of oesophagitis in dogs and cats is **GER** during anaesthesia, and more severe situations can lead to oesophageal stenosis (Sellon and Willard, 2003 and Willard, 2014). In other situations, the inflammation of the oesophagitis decreases the tone of the **GES**, which predisposes to **GER**, which in turn exacerbates the inflammation (Sellon and Willard, 2003). Another possible complication of **GER** is aspiration pneumonia secondary to regurgitation episodes (Adamama-Moraitou et al., 2002; Sellon and Willard,
2003).

GER is associated with an intermittent pattern of regurgitation (Washabau, 2013), as well as other clinical signs compatible with reflux oesophagitis such as anorexia, dysphagia, odynophagia and sialorrhoea (Sellon and Willard, 2003). Ingesting more food than the stomach can hold often results in **GER**.

Among the possible conditions where the presence of **GER** can be seen are situations of congenital oesophageal asthenia (e.g. congenital mega-oesophagus) or acquired oesophagus (e.g. mega-oesophagus secondary to myasthenia gravis, hypoadrenocorticism, hypothyroidism, dysautonomia), as well as hiatus hernias (Nelson and Couto, 2010).

In order to diagnose **GER**, it is essential to study and research the primary cause. The data obtained from the anamnesis, clinical examination and imaging tests, namely X-rays (with and without contrast) and oesophagoscopy, are therefore extremely important.

WeGastro® is a Complementary Compound Food for dogs and cats developed to support gastric function. Sodium alginate in contact with gastric acid precipitates to form an adhesive gel with a buffering effect on top of the gastric contents, thus reducing gastro-oesophageal reflux. Another mechanism of action is its protective and healing effect on the gastric and oesophageal mucosa.

Bibliography:
Adamama-Moraitou, K.K. et al. Benign esophageal stricture in the dog and cat: a retrospective stydyof 20 cases. Canadian Journal of Veterinary Research, v.66, n.1, p.55-59, 2002.
Favarato, E.S., Souza, M.V., Costa, P.R.S. (2010) Refluxo gastroesofágico em cães anestesiados: fisiopatologia, clínica, diagnóstico e terapêutica. Ciência Rural, v.40, n.11, p.2427-2434.
Sellon, R. e Willard, M. (2003) Esophagitis and esophageal strictures. Veterinary Clinics Small Animal, 33: 945–967.
Tams, T. (2003) Chapter 4 – Diseases of the esophagus. In: Handbook of Small Animal Gastroenterology 1st ed. Bartges, J., DeNovo, R., Green, P., Konde, L., Lappin, M., Larson, V., Leibman, N., Olgivie, G., Pugh, C., Ritcher, K., Seim, H., Sherding, R., Simpson, K., Tams, T. e Triolo, A., Saunders, USA, ISBN: 0-7216-8676-1, pp.118-158.
Washabau, R. (2013) Chapter 21 – Regurgitation. In: Canine and Feline Gastroenterology 1st ed. Washabau, R. e Day, M., Elsevier Saunders, USA, ISBN: 0 905214 73 0, pp. 157-162.
Willard, M. (2014) Chapter 28 - Clinical Manifestations of Gastrointestinal disorders. In: Small Animal Internal Medicine 5th ed. Couto, G. e Nelson, R., Elsevier Mosby, USA, ISBN: 978-0-323-08682-0, pp. 367-371.