

# Congenital Oesophageal Stenosis in a Labrador Retriever

## ABSTRACT

- > A one-year old Labrador retriever presented for investigation of chronic regurgitation with onset from weaning
- > Following investigations, a presumptive diagnosis of congenital oesophageal stenosis was made
- > The case was successfully managed conservatively and was well at two-year follow up
- > This case represents one of few small animal cases of congenital oesophageal stenosis ever reported

## INTRODUCTION

> **Congenital oesophageal stenosis (COS):** intrinsic narrowing of the oesophagus present from birth, resulting from malformation in the oesophageal wall during development.

> **Three histopathological types** of COS described in human medicine<sup>1</sup>:

- > Tracheobronchial remnants
- > Fibromuscular hypertrophy
- > Membranous web

> **A rarely reported disease** in small animal patients:

- > 4 other cases reported in the literature<sup>2-5</sup>.
- > 2 cases report histopathological findings; one similar to the membranous web type<sup>2</sup>, the other to the fibromuscular hypertrophy type<sup>3</sup>.

> **Presentation:**

- > Regurgitation initiating post-weaning.
- > Secondary aspiration pneumonia may develop with associated signs.

> **Presumptive diagnosis:**

- > Demonstration of stenosis of the oesophagus on diagnostic imaging.
- > Exclusion of other causes of regurgitation.
- > Definitive diagnosis on histopathology; post-mortem or following surgical treatment.

> **Management:**

- > Medical management recommended as first line treatment for human cases where histopathological diagnosis uncertain.
- > Surgery recommended for cases with persistent stenosis that does not respond to successive dilations<sup>6</sup>.

## CASE HISTORY AND EXAMINATION

> A one-year old male neutered Labrador retriever presented for investigation of chronic regurgitation, initiated upon weaning.

> No recent history of foreign body ingestion, and he was not receiving any current medication. Recent GA reported, but signs predated this.

> Contrast radiographs at referring veterinarians revealed a narrowing at the cranial intrathoracic oesophagus, no evidence of aspiration pneumonia or megaesophagus.

> Clinical examination revealed a young, otherwise healthy dog with normal body condition,

## DIAGNOSTICS

> **Haematology and biochemistry:**

- > Unremarkable.

> **Videofluoroscopy:**

- > Dorsal narrowing of the cranial intrathoracic oesophagus.
- > Normal swallowing and prehension, no dysmotility.

> **CT-angiography:**

- > Ruled out an extraluminal causes for the oesophageal narrowing (vascular ring anomaly, masses).

> **Oesophagoscopy:**

- > Circumferential narrowing of the lumen of the oesophagus with the appearance of a muscular sphincter at the cranial thoracic oesophagus.
- > No fibrous bands or strictures identified.
- > Normal oesophageal mucosa and stomach were visualized.

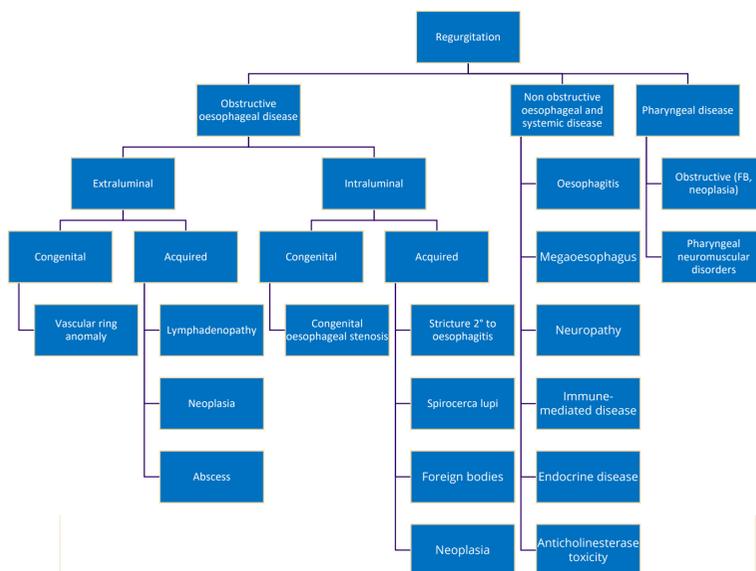


Figure 1. Differentials to consider during investigation of regurgitation.



Figure 2. Contrast lateral thoracic radiograph taken at the referring veterinarian identified a narrowing at the cranial intrathoracic oesophagus.



Figure 3. Videofluoroscopy illustrating the presence of a dorsal narrowing within the cranial aspect of the intrathoracic oesophagus.

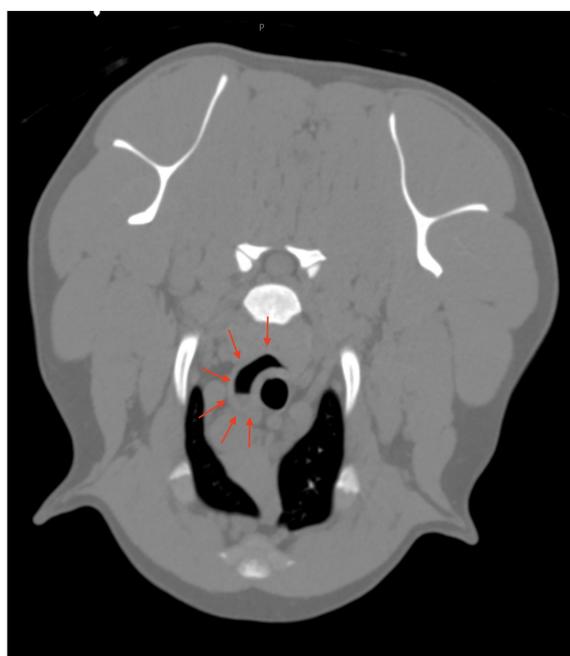


Figure 4. CT-angiography revealed mild dilation of the cranial oesophagus between C6-T2. There was no evidence of oesophageal obstruction from extraluminal compression.



Figure 5. Oesophagoscopy identified a muscular, circumferential narrowing of the lumen of the oesophagus in the cranial thoracic oesophagus, bearing resemblance to the cardia.

## DIAGNOSIS

> **Congenital Oesophageal Stenosis: Suspected Fibromuscular Hypertrophy Type**

## MANAGEMENT

> Distension with air during endoscopy resulted in immediate recoil of the stenosis; balloon dilation was not attempted.

> **Conservative treatment implemented:** diet of softened dry food with a specific feeding regime.

> **Well at two-year follow up:** regurgitation episodes completely controlled on conservative management.

## DISCUSSION

> **Significance of histopathological type:**

> A presumptive diagnosis of COS was made based on the signalment, demonstration of stenosis on various imaging modalities, and exclusion of other causes for the stenosis.

> Definitive diagnosis requires histopathology, however, acquiring a histopathological diagnosis ante-mortem and prior to surgery represents a diagnostic challenge. Obtaining oesophageal biopsies from grossly normal oesophageal mucosa is difficult, and if obtained the sample is often not sufficiently representative for diagnosis<sup>1</sup>.

> Histopathological type has clinical relevance in human medicine; there is evidence of variable response to treatment depending on histopathological type<sup>6</sup> and attempts are often made to differentiate histopathological type prior to definitive diagnosis based on gross appearance endoscopically and on varying imaging modalities.

> Fibromuscular hypertrophy is assumed in this case due to gross appearance and behaviour of the stenosis. This type is more likely than the tracheobronchial remnants type to respond to medical management in humans<sup>6</sup>.

> **Non-surgical (dilation therapy) and surgical treatments for COS are described in human medicine.**

> Traditional surgical treatment associated with high rates of complication<sup>6</sup>.

> Complications such as perforation associated with dilation therapy<sup>6-8</sup>.

> Variable reported success rates for dilation therapy alone in humans<sup>6-9</sup>.

> Given the mild clinical signs in this case, conservative management was attempted as first line treatment, and the regurgitation was successfully managed.

> **Compared to previously reported cases:**

> This case has a unique gross appearance. Many describe an abrupt stricture-like band<sup>2,4</sup>, rather than the muscular, tapering stenosis seen in the present case.

> This case had a distinct presentation and was much more mildly affected, surviving to adulthood without investigation sought and without the stunted growth seen in the preceding cases, and where some were euthanised<sup>3,5</sup>, this case was managed successfully with conservative treatment.

> COS is a rarely diagnosed congenital condition of small animals, but should be considered as a differential in young animals presenting with regurgitation since weaning.

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