

ENDOSCOPIC RETRIEVAL OF *PIPER BETEL* IN A DOG WITH HYPOTHYROIDISM ASSOCIATED MEGAOESOPHAGUS

K. Sasikala¹ and G. Vijayakumar²

¹M.V.Sc Student, ²Professor and Head, Department of Veterinary Clinical Medicine, Veterinary College and Research Institute, TANUVAS, Namakkal – 637 002(T.N.).

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A seven year old non descriptive dog weighing about 22 kg was presented to Veterinary College and Research Institute, Namakkal hospital with the history of anorexia for 3 days. On clinical examination animal was dull with exaggerated lung sounds on auscultation. Haematobiochemical values were within the normal range except for reduced total thyroxine level. Chest and abdominal survey radiography did not show any abnormality. Animal was subjected to video endoscopy under general anaesthesia. On oesophagoscopy oesophagus was packed with *Piper betel* leaves with dilatation of cervical and thoracic oesophagus. Around 18 betel leaves were removed by using endoscopic snare. The owner was advised to follow elevated feeding with semisolid diet. Thyroxine @ 20µg /kg was administered twice daily for hypothyroidism. The animal showed clinical improvement after 20 days.

Keywords: Dog, Endoscopy, Hypothyroidism, Megaesophagus, Retrieval.

Megaesophagus is a condition where there is a decreased or absent motility (movement, muscular contractions) of the oesophagus (Tams, 2003). This syndrome may occur as a congenital disorder (uncommon), or it may manifest in adult animals as an idiopathic (common) or acquired lesion (Jergens, 2010). Megaesophagus is an important cause of regurgitation, may be associated with hypothyroidism (Huber *et al.*, 2001). Aspiration pneumonia is a common complication of megaesophagus (Tams, 2003). Fracassi and Tamborini (2011) reported high concentration of cTSH associated with low basal TT4 in a dog with megaesophagus. Esophagoscopy is rarely required for diagnosis of megaesophagus, except when obstructive disease (neoplasia) or reflux esophagitis are suspected. However, a definitive association between hypothyroidism and megaesophagus has not been proved (Johnson *et al.*, 2009). Endoscopy is a minimally invasive tool that can be used for retrieval of foreign bodies. When compared with surgery, endoscopy offers a less invasive and less expensive option. Elevated feeding with semi solid food and antibiotics for aspiration pneumonia should be followed for dogs with megaesophagus (Jergens, 2010). The present article describes endoscopic retrieval of *Piper*

betel leaves in a non descriptive dog with hypothyroidism associated megaesophagus.

Case History and Observations

A seven year old non descriptive dog weighing about 22 kg was presented to Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal with the history of anorexia for 3 days. On clinical examination animal had dullness, exaggerated lung sounds on auscultation, dull and dry skin with patchy alopecia. Haemato-biochemistry revealed normal haemoglobin (13.8 g/dl), packed cell volume (42.17%), red blood cells (6.23×10^6 /cumm), white blood cells (7.07×10^3 /cumm), blood urea nitrogen (24 mg/dl) and creatinine (0.7 mg/dl) levels. Total T4 level on serum was 0.5µg/dl. No foreign body / abnormality could be detected on lateral chest and abdominal plain radiography. Ultrasonographic findings were normal.

Treatment and Discussion

Oesophagoscopy was carried out using atropine (@ 0.04 mg/kg b.wt as pre-anaesthesia), xylazine (@ 0.5 mg/kg b.wt IM) and propofol (@ 4 mg/kg b.wt IV as anaesthetic). *Piper betel* leaves obstructing the oesophagus with dilatation of cervical and thoracic oesophagus was noticed on oesophagoscopy (Fig. 1). Around 18 betel leaves were removed by using endoscopic

snare (Fig. 2). Animal was administered with Ringer's lactate (@ 20ml/kg I/V), amoxicillin-cloxacillin (@ 20mg/kg I/V BID) and pantoprazole (@ 1mg/kg I/V) for 3 days. Levothyroxine (@ 20µg/kg BID) was advised

for 1 month. The owner was advised to follow elevated feeding with semisolid diet. TT4 level was normal after 1 month of therapy. Animal recovered uneventfully following treatment.



Fig. 1 Piper betel on dilated oesophagus



Fig. 2 Endoscopically retrieved betel leaves

Levothyroxine (@ 20µg/kg) followed in the present case was in concurrence with Fracassi and Tamborini (2011). In conclusion betel leaves were removed successfully by using endoscope in a non-discript dog with hypothyroidism associated megaesophagus. Elevated feeding with levothyroxine (@ 20µg/kg) gave excellent recovery in the present case.

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