

Diagnosis of Elongated Soft Palate and Everted Laryngeal Saccules in a Dog

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Abstract

A Pug dog was presented with history of difficulty in breathing, snoring and inappetence. The dog was subjected to radiographic and endoscopic evaluation with no abnormalities detected. The endoscopic examination of posterior end of oral cavity, pharynx and larynx revealed presence of elongated soft palate and everted laryngeal saccules. The condition was successfully corrected *via* staphylectomy-soft palate resection following standard surgically protocol.

Keywords : Brachycephalic; elongated soft palate; endoscopy; laryngeal saccules

Introduction

The Brachycephalic Airway Syndrome (BAS) is a well described combination of upper airway disorders in predisposed breeds. Difficulty in breathing of brachycephalic (short nosed) breeds of dogs and its therapeutic considerations were reported in early 1930s. Symptoms and intensity of dyspnoea can vary in different episodes. Snoring is the most common manifestation. Severe dyspnoea with life threatening asphyxia and syncope are the worst form of manifestations. Narrow nostrils, elongated soft palate and everted laryngeal ventricles (Harvey, 1982a; Harvey, 1982b; Harvey, 1982c; Lorinson *et al.*, 1997 and Koch *et al.*, 2003) were the reasons for respiratory problems in brachycephalic airway syndrome. It is to be noted that all these anatomical structures are located either rostrally or caudally to nasal cavity. Widening of stenotic nares, shortening of elongated soft palate and if required resection of everted laryngeal saccules (Farquharson and Smith, 1942; Trader, 1949; Leonard, 1957). The present paper describes elongated soft palate and everted laryngeal saccules in a dog and its diagnosis.

History and Observations

A three year old male Pug dog was presented with history of difficulty in breathing, snoring and inappetence. On clinical examination, the dog had slightly elevated temperature of 39.2°C, heart rate of 108/min, respiration rate of 48/min and congested conjunctival mucous membrane.

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Diagnosis and Treatment

The dog was subjected to radiographic and endoscopic evaluation. No abnormalities were detected on radiographic examination of thoracic cavity. The dog was prepared for endoscopic examination of respiratory tract and anaesthetized with Isoflurane gas anaesthesia and Inj. Propofol combination. After ensuring proper anaesthesia, the endoscope was introduced in to respiratory tract. The endoscopic examination of posterior end of oral cavity, pharynx and larynx revealed presence of elongated soft palate and everted laryngeal saccules. On diagnosis of the condition of Brachycephalic airway syndrome, the dog was referred to surgical correction of elongated soft palate and everted laryngeal saccules. The condition was surgically corrected *via* staphylectomy - soft palate resection following standard protocol.

Discussion

The term brachycephalic syndrome refers to combination of elongated soft palate, stenotic nares and everted laryngeal saccules all of which are commonly seen in short headed dog breeds. Elongated soft palate is a condition where the soft palate is too long so that tip of it protrudes into airway and interferes with movement of air into lungs. Stenotic nares are malformed nostrils that are narrow or collapse inward during inhalation making it difficult for dog to breathe through its nose. Everted laryngeal saccules is a condition in which tissue within the airway, just in front of vocal cords, is pulled into trachea and partially obstructs airflow. Dogs with elongated soft palates generally have a

Everted laryngeal sacculles



Fig. 1 : Everted laryngeal sacculles



Fig. 2 : Elongated soft palate

history of noisy breathing during inspiration. Soft palate resection helps to improve breathing and relief to this problem. In the present case, diagnosis was made early with endoscopic examination and the dog recovered uneventfully.

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