**IMAGING DIAGNOSIS—LARYNGEAL COLLAPSE DUE TO CRICOID CARTILAGE FRACTURE**

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Signalment

**Even-year-old, 42 kg, neutered male Labrador Retriever.**

History

The dog was hit by a car and immediately after the accident no abnormalities were present. One month later there were changes in phonation and dyspnea. Considerations were laryngeal paralysis, laryngeal neoplasia, abscess, cyst, granuloma, or hematoma. Laryngeal collapse due to chondromalacia was considered less likely due to the breed. The laryngeal lumen was narrow with an irregular mucosal surface and a mass was considered. A biopsy of the mucosal surface was interpreted as inflammation and granulation tissue.

Imaging

A laryngeal computed tomography (CT) study was performed to substantiate that a mass of the larynx was present. Placing the endotracheal tube was difficult and the largest tube that could be inserted had an inner diameter of 8 mm. Three-millimeter contiguous transverse images were acquired from the middle mandibular region to the thoracic inlet.* The left dorsal lateral aspect of the cricoid cartilage was fractured with overriding fracture fragments causing axial deviation of the left lateral laryngeal wall and laryngeal lumen narrowing. There was mild uniform thickening of the mucosal surface. A biopsy of the mucosal surface was interpreted as inflammation and granulation tissue.

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*HiSpeed CT/i, GE Medical Systems, Milwaukee, WI.
ening of the laryngeal soft tissues but a mass was not seen (Figs. 1 and 2).

**Outcome**

The patient was managed with exercise restriction and recommendation of as little exposure to temperature extremes as achievable. The owner stated at the time of this report that the patient is doing well with only very mild dyspnea when excited.

**Discussion**

Laryngeal collapse is rare, usually described in the toy breeds, and is typically associated with degenerative changes of the laryngeal cartilage and brachycephalic airway syndrome.\(^1\) Our report documents the utility of CT in diagnosis of laryngeal collapse due to trauma and laryngeal cartilage fracture. Traumatic laryngeal collapse is presumably rare in the dog and cat. It has been described in humans where subtle changes in laryngeal cartilage structure and function may be more easily recognized as they affect speech as well as respiration.

**REFERENCES**
