Man with Hoarseness after Falling

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Introduction

A 44-year-old man presented to the emergency department after falling down and hitting his neck directly to the shaft of a tractor. He complained of hoarseness, odynophagia and difficulty breathing. On physical examination, he had normal vital signs. His neck was swollen without crepitus, stridor or pharyngeal erythema. Cervical ultrasonography revealed soft tissue swelling on the left aryepiglottic fold and decreased mobility of the left vocal cord (Figure 1 and video 1). Computed tomography of the neck demonstrated a high-density lesion close to the left side of larynx involving left true vocal cord (Figure 2).

Figure 1: Transverse ultrasound image at the level of the vocal cords demonstrating a normal thyroid cartilage (arrowhead), normal right vocal cord (asterisk) and a soft tissue swelling consistent with hematoma (yellow arrow) lateral to the left vocal cord (white arrow).

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Figure 2: (a) Axial contrast-enhanced CT neck shows a 2.4 x 2 x 4.1-cm slightly high density lesion favored to represent hematoma or edema (arrow) close to the left side of larynx involving the left true vocal cord at glottic level. 
(b) Axial contrast-enhanced CT neck shows a 2.4 x 2 x 4.1-cm slightly high density lesion favored to represent hematoma or edema (arrow) close to the left side of larynx at supraglottic level. 
(c) Coronal contrast-enhanced CT neck shows a 2.4 x 2 x 4.1-cm slightly high-density lesion consistent with hematoma (arrow) close to the left side of larynx at about C4 to C5 levels involving the left supraglottic, glottic, and subglottic tissues.

Diagnosis

*Acute Traumatic Injury of the Larynx.* The patient was managed conservatively. He was admitted to the ICU and intubated to protect his airway for 7 days. Fiberoptic laryngoscopy revealed hematoma on left aryepiglottic fold with decreased mobility and swelling of left true vocal cord. The patient’s hospital stay was uncomplicated. He was discharged home on day eight receiving 5-day dose of prednisolone.

External laryngeal trauma is uncommon but potentially deadly injury [1]. The most common causes are motor vehicle collisions and sporting accidents [1]. The standard for diagnosis is CT but ultrasonography can lead to diagnosis [2,3]. Endoscopic findings can be obtained by direct or indirect laryngoscopy, nasopharyngoscopy, bronchoscopy and esophagoscopy [4]. The initial management is the establishment of a secure airway with a choice of intubation, tracheotomy or cricothyroidotomy [5]. The conservative approach is suitable when the laryngeal framework is stable but surgical intervention is the treatment of choice in patients with massive edema or multiple fractures [6,7].

References