Bilateral vocal cord paralysis following stent placement for proximal esophageal stricture

An 83-year-old man with a history of squamous cell cancer of the esophagus presented for endoscopic management of refractory dysphagia. A malignant-appearing esophageal stricture was identified 20 cm from the incisors (Fig. 1). The stricture was dilated with 6- to 8-mm and 8- to 10-mm balloon dilators. An 18 mm × 10 cm Alimaxx fully covered nitinol stent (Alveolus, Inc., Charlotte, North Carolina, USA) was then placed under fluoroscopic guidance across the stricture. Several hours after the procedure, the patient developed inspiratory stridor. He presented to the emergency department approximately 12 hours later. Plain radiographs of the neck showed the stent positioned just distal to the upper esophageal sphincter (Fig. 2). A CT scan revealed a focal soft tissue prominence between the esophagus and trachea at the level of T1, indicating prior radiation, residual mass, or recent injury (Fig. 3). There was no evidence of external airway compression. Fiberoptic laryngoscopy demonstrated bilateral vocal cord paralysis. Despite removal of the stent, the patient required a tracheostomy.

The most common causes of bilateral vocal cord paralysis in adults include iatrogenic recurrent laryngeal nerve injury during thyroidectomy or endotracheal intubation, followed by neurologic disorders and malignancy [1]. Additionally, there are reports of laryngeal nerve paralysis secondary to achalasia [2], esophageal foreign bodies [3], and use of an esophageal overtube [4]. In the present case, we presume the cause of injury was recurrent laryngeal nerve compression following placement of the esophageal stent. The delay in presentation to the emergency department may also have resulted in more severe nerve injury as therapeutic decompression was delayed.

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