Pleomorphic Adenoma of the Trachea

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Pleomorphic adenomas are the most common (71%) benign salivary gland tumors.¹ In addition to being found in the major salivary glands, they have been reported in other sites of the head and neck. These include the soft palate, hard palate, nasopharynx, orbital area, buccal mucosa, cheek, nasal septum, upper lip, lower eyelid, and external auditory canal.² We present an unusual clinical presentation of an airway-obstructing tracheal pleomorphic adenoma treated with endoscopic resection.

A frail 83-year-old female was referred to the Department of Otolaryngology—Head and Neck Surgery clinic at the University of Virginia for evaluation of a tracheal mass. She presented to her primary care physician with 1 month of worsening shortness of breath and waking up with blood in her oropharynx. She was evaluated by an otolaryngologist who diagnosed her with a large, nearly completely obstructing tracheal mass during a flexible laryngoscopy examination. The patient denied personal tobacco use, however, consumed alcohol and had long-time exposure to secondhand smoke. Her past medical history was significant for hypertension and rheumatoid arthritis. On physical examination, she was in no acute distress and had no labored breathing. Her examination was otherwise unremarkable. Her hemoglobin was 8.4 g/dL, and hematocrit was 25.6%; other laboratory results were within normal limits. A computed tomography study of her neck and chest demonstrated a smooth, nonenhancing tracheal mass measuring approximately 1.6 cm × 1.3 cm (Figure 1). Flexible bronchoscopy examination revealed a solitary, hypervascular, polypoid mass with a wide base obstructing approximately 90% of the posterior tracheal lumen (Figure 2).

Because of the degree of airway obstruction, the patient was admitted to the hospital directly from clinic and underwent endoscopic excision of the tracheal mass. The mass was 3.0 cm below the vocal fold edge. The majority of the tumor was excised en bloc using a fiber-based carbon dioxide laser and rigid bronchoscope. The attachment along the membranous tracheal wall was truncated to avoid creating a tracheoesophageal fistula. After the tracheal mass was debulked, esophagoscopy demonstrated normal appearing esophageal mucosa and fullness of the anterior wall, presumed to be due to mass effect by the tumor within the party wall of the trachea and esophagus. The postoperative course was uneventful, and the patient was discharged home 2 days later.

On histologic examination, the tumor consisted of bland, basaloid proliferation growing in orderly cords with multifocal areas of squamous differentiation. Immunohistochemically, the tumor was negative for chromogranin and synaptophysin and strongly positive for p63 and smooth muscle actin. The markers for c-kit highlighted scattered mast cells and glial fibrillary acidic protein-stained scattered individual cells. These features were consistent with the diagnosis of pleomorphic adenoma (Figure 3). The standard treatment for a pleomorphic adenoma in this location is segmental tracheal resection with a clear margin to reduce local recurrence.² However, based on the patient’s age and frail appearance, the decision was made to continue with observation and additional airway debulking, if needed.

Pleomorphic adenoma is a rare etiology for a tracheal mass. To reduce the rate of recurrence, complete surgical excision is the curative treatment; however, endoscopic removal may be...
used in cases of urgent respiratory symptoms, significant medical comorbidity, or hemorrhage.\textsuperscript{3,4}

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