Title: Tracheobronchopathia Osteochondroplastica masquerading as post-nasal drip - a diagnostic nightmare!

Abstract:

Benign tracheal tumors are underdiagnosed due to their indolent nature and nonspecific symptoms. Tracheobronchopathia Osteochondroplastica (TO) is a relatively uncommon tumor which can present with symptoms suggestive of postnasal drip or obstructive airway disease. We present a middle-aged female with chronic sensation of persistent mucus in her throat for 5 years. She was ultimately diagnosed as TO on chest imaging and bronchoscopy.

Introduction:

Benign tumors of the tracheobronchial tree are usually slow growing and often difficult to diagnose. Due to the nonspecific symptoms caused by these tumors, they can often be misdiagnosed and treated as obstructive lung disease or asthma.

It is difficult to identify benign tracheal lesions on chest radiography. The appearance can mimic malignant lesions on radiography. Chronic cough, dyspnea, recurrent infections, hemoptysis, and airway obstruction are most common symptoms of these lesions. Common benign lesions of the tracheobronchial tree include hamartoma, lipoma, neurogenic tumor, inflammatory polyp, amyloidoma, papilloma, pleomorphic adenoma, granular cell tumor, hemangioma, and fibromas.

TO is a relatively uncommon lesion of the upper airway. It is characterized by visualization of osseous and/or cartilaginous submucosal nodules in trachea and large bronchi.[1] It typically spares the posterior wall of trachea. Diagnosis is established based on the typical bronchoscopic appearance. Biopsy is supportive to rule out other etiologies. Depending upon the location and extent of involvement, TO can present with varying symptoms.

No specific treatment exists for TO. Various modalities have been used with varying success. Treatment is centered around symptomatic control with bronchodilators if airway obstruction is present. In severe cases of bronchial obstruction, bronchial dilation may be indicated. Radiotherapy has provided minimal improvement in symptoms.[2]

Case description:

A 55-year-old lady, with history of hypothyroidism due to Hashimoto's thyroiditis, chronic sinusitis, gastroesophageal reflux disease, and anxiety disorder, presented with chronic sensation of persistent mucus in her throat for past 5 years. Over the course of time, it was attributed to chronic sinusitis, gastroesophageal reflux disease, anxiety spectrum disorder, and possibility of bronchiectasis.

In addition to her treatment for anxiety, she had been treated with chronic acid suppression using proton pump inhibitors, intranasal steroids, and over the counter mucolytics. Her symptoms did not remit over the course of 5 years. She also received bronchodilators- salbutamol twice daily for 1 month,

with no remission in symptoms. Her pulmonary function tests were normal, with no bronchodilator response. Pulmonary function testing showed an FEV1 of 2.58 liters-96% predicted, an FVC of 3.18 L-92% predicted and FEV1/FVC ratio of 81%. Due to persistence of her symptoms, she was referred to pulmonology for further evaluation.

A contrast-enhanced computerized tomography scan of her chest showed small noncalcified nodular opacities were seen around the peripheral aspects of the trachea and left mainstem bronchus. Flexible bronchoscopy showed an erythematous larynx, and a polypoid lesion of the trachea with diffuse mucosal calcifications sparing the membranous part. [Figure 1] The carina was normal in appearance. Rest of the airway was unremarkable. A biopsy was taken from the lesion which showed normal respiratory mucosa with no significant pathological change.

Post bronchoscopy, patient's symptoms persisted. She was recommended to continue the use of proton pump inhibitors and intranasal steroids. A decision was taken in conjunction with the patient to not employ any surgical techniques or radiotherapy considering limited success reported in the past with these treatments. Patient will follow with otorhinolaryngologist for follow-up of her allergic rhinitis/sinusitis.

Discussion:

Tracheobronchopathia Osteochondroplastica is a rare benign condition characterized by presence of submucosal nodules in the tracheobronchial wall. These nodules are osseous or cartilaginous in nature. The disorder is under reported and speculated incidence of as high as 1:125 has been reported.[3] It can be asymptomatic or present with non-specific respiratory symptoms (e.g., chronic cough, sputum production, hemoptysis, and dyspnea on exertion). The mean duration of reaching a diagnosis of TO from onset of symptoms has been reported to be 4 years.[1] In our case, the duration from onset of symptoms to a diagnosis being established was 5 years.

Conclusion:

Persistent nonspecific symptoms attributed to upper respiratory tract/pharynx should raise a suspicion of benign tracheal tumors like TO, after common etiologies have been ruled out.

References:

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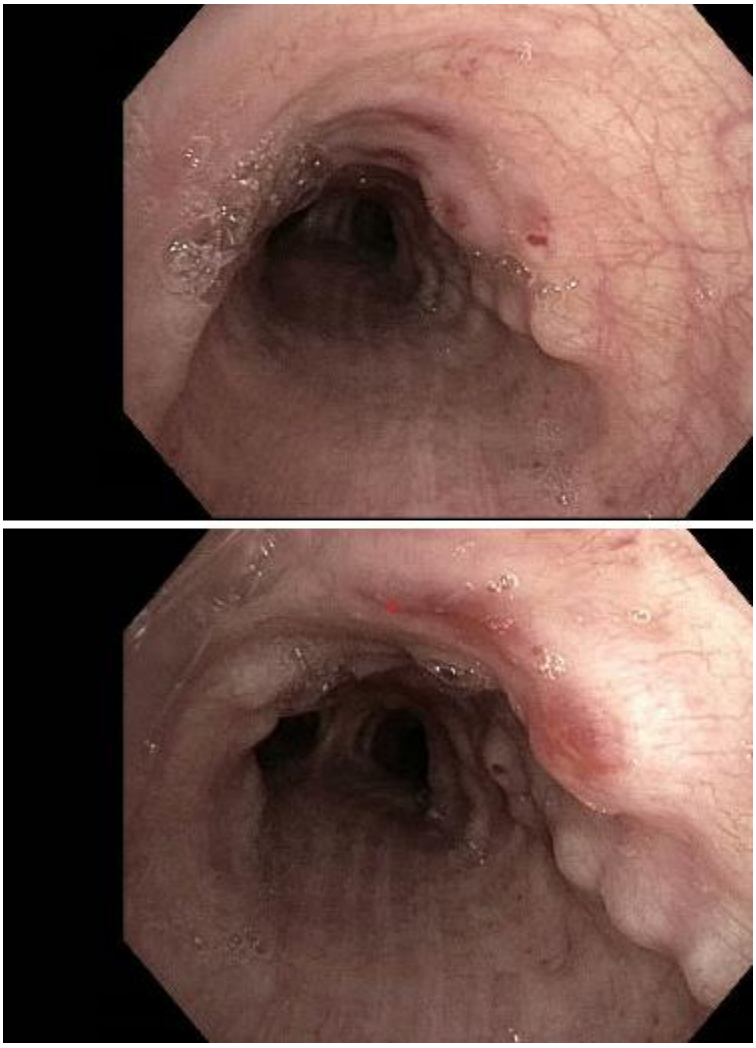

Figure 1: Bronchoscopic showing polypoid lesion of the trachea with diffuse mucosal calcifications - characteristic of Tracheobronchopathia Osteochondroplastica.