Other Asthma Considerations

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KEYWORDS

• Asthma • Aspirin-exacerbated respiratory disease • Foreign body aspiration
• Cough-variant asthma • Work-related asthma • Hypersensitivity pneumonitis
• Churg-Strauss • Allergic bronchopulmonary aspergillosis

KEY POINTS

- Patients with difficult-to-treat asthma should be evaluated for alternative diagnoses.
- Aspirin-exacerbated respiratory disease consists of the triad of sinonasal polyposis, bronchial asthma, and aspirin intolerance. Diagnosis is confirmed by oral aspirin challenge. Aspirin desensitization may improve otherwise difficult-to-control sinusitis and asthma in these patients.
- Foreign-body aspiration is an important mimicker of asthma in children. Rigid bronchoscopy can secure the diagnosis and early foreign-body removal will prevent long-term complications.
- Patients with nonasthmatic eosinophilic bronchitis have chronic cough, sputum eosinophilia, and absent bronchial hyper-reactivity on spirometry. Inhaled-corticosteroids therapy may be effective.
- Work-related asthma is a complex syndrome involving potential inducers or exacerbators of bronchoconstriction that relate to occupational exposure. Among patients with difficult-to-treat asthma, historical assessment should include a review of workplace exposures and symptomatic changes with work avoidance.
- Hypersensitivity pneumonitis represents a distinct pathophysiologic entity involving alveolar lymphocytosis. Patients with exposure-related symptoms may benefit from altered therapy based on proper delineation of pathophysiologic mechanism of disease.
- Churg-Strauss syndrome is a progressive constellation of rhinosinusitis, nasal polyposis, asthma, vasculitis, and peripheral neuropathy. Initiation of therapy early in disease course can alter progression and slow the development of visceral vasculitic damage.
- Allergic bronchopulmonary aspergillosis can complicate the management of asthma. Asthma clinicians should maintain a low threshold of suspicion to prompt close investigation for this process in patients with difficult-to-treat asthma, fevers, weight loss, or expectoration of mucus plugs.

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INTRODUCTION

Asthma is a heterogeneous syndrome of cough, wheeze, dyspnea, and chest tightness that affects approximately 300 million individuals worldwide. Pathologically, airways are characterized by chronic inflammation and diminished bronchial diameter. Physiologically, spirometry demonstrates a degree of reversible airflow obstruction typically responsive to bronchodilators. Although these physiologic and pathologic distinctions contribute to the definition of asthma, the clinical symptoms of this syndrome provide practitioners little help in arriving at a specific diagnosis. Given the prevalence of asthma and the relative paucity of so-called asthma mimickers, the common constellation of cough, wheeze, dyspnea, and chest tightness usually signifies underlying asthma. However, in a subset of patients, these symptoms may represent a different underlying disease process with variable responsiveness to classic asthma therapies. In these patients, disease may progress while practitioners attempt conventional therapy. Some types of asthma may require alternative approaches to relieve symptoms successfully.

Although the aim of this article is to clarify the differential diagnosis of asthma to the otolaryngologist, the list of potential mimickers is broad (**Box 1**). Patients with bronchial wall edema from congestive heart failure may have concomitant wheezing and dyspnea unrelated to airway inflammation, whereas obese patients may experience symptoms consistent with asthma without any significant bronchial diameter-related reduction in airflow. Similarly, there are a wide array of causes that may produce chronic wheezing, cough, and shortness of breath in any particular patient. This article addresses some of the more common medical and surgical processes that may be encountered in the practice of asthma management. For each diagnosis, awareness of the potential will increase the practitioner's likelihood of considering (and evaluating for) an alternative pathologic condition in an at-risk patient.

Box 1
Differential diagnosis of asthma

- Acute bronchitis
- Allergic bronchopulmonary aspergillosis
- Chronic obstructive pulmonary disease
- Churg-Strauss syndrome
- Congestive heart failure
- Foreign body aspiration
- Hypersensitivity pneumonitis
- Laryngopharyngeal reflux
- Nonasthmatic eosinophilic bronchitis
- Obesity
- Tracheal or bronchial stenosis
- Vascular ring
- Vocal cord dysfunction
- Work-related asthma