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Management of Asthma by Using Current Guidelines

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Asthma is considered to be primarily an inflammatory disorder with secondary bronchoconstriction. Patient manifestations usually are shortness of breath, wheezing, cough and chest tightness. The intensity may vary over time and become exacerbated with external factors that further irritate the airway. While bronchial hyperactivity and airway inflammation may likely be present they are not the only factors that determine diagnosis. Identification of external and other factors that exacerbate asthma is crucial and smoking is also a modifiable factor. High risk patients including geriatric and pediatric patients may require more aggressive treatment. The long term goals of management are to achieve long term symptomatic relief which may include the use of prophylactic agents. Management of asthma initially supported the use of a short acting bronchodilator and prophylactic management where deemed necessary. The categories of asthma medications include controller, reliever, prophylactic and add-on medications. Effective 2019 the GINA guidelines no longer support the use of short acting bronchodilators as preferred initial therapy. Preferential therapy now favors the use of inhaled corticosteroids with a short acting bronchodilator. A step-up approach is initiated when necessary, which includes dosage adjustment of inhaled corticosteroids with bronchodilators and eventually to include adjunct medications and monoclonal. This presentation outlines the pathogenesis of asthma, patient presentation and diagnosis and current treatment guidelines. Although asthma cannot be cured, appropriate management can control the disease and enable people to enjoy good quality of life.

Short-term medications are used to relieve symptoms. People with persistent symptoms must take long-term medication daily to control the underlying inflammation and prevent symptoms and exacerbations. Medication is not the only way to control asthma. It is also important to avoid asthma triggers - stimuli that irritate and inflame the airways. With medical support, each asthma patient must learn what triggers he or she should avoid.

Although asthma does not kill on the scale of chronic obstructive pulmonary disease (COPD) or other chronic diseases, failure to use appropriate medications or to adhere to treatment can lead to death. Establishing asthma symptom control using pharmacologic and nonpharmacologic interventions improves quality of life and prevents exacerbations in patients with asthma. The Global Initiative for Asthma 2019 guidelines provide recommendations for asthma treatment organized into five steps that correlate with disease severity. Medication options include inhaled corticosteroids (ICS), long-acting beta2 agonists, short-acting beta2 agonists (SABAs), leukotriene receptor antagonists, and oral corticosteroids. Recent data show unfavorable outcomes for SABAs used alone for as-needed treatment of symptoms of mild asthma. Guideline changes include the use of a low-dose ICS with formoterol for as-needed treatment in adults with mild asthma, or for use whenever a SABA would be used. Appropriate, effective medication regimens combined with counseling on proper inhaler technique will help patients achieve asthma-management goals. Asthma, a chronic inflammatory airway disease characterized by airway hyperresponsiveness, may present with symptoms such as wheezing, shortness of breath, chest tightness, and cough.1 These symptoms may vary over time and in intensity, making effective management of asthma important. Symptom triggers may include exercise, viral respiratory infections, and environmental factors, such as smoking. Symptoms that are left untreated may lead to exacerbations. An exacerbation is an acute episode in which symptoms worsen drastically and lung function progressively declines. Any occurrence of an exacerbation warrants a discussion regarding the patient's current asthma treatment regimen because of the risks of hospitalization, emergency-care visits, and asthma-related death. The 2019 Global Initiative for Asthma (GINA) guidelines do not recommend the use of a short-acting beta2 agonist (SABA) inhaler alone for the treatment of mild asthma; instead, they recommend low-dose inhaled corticosteroid (ICS)-formoterol use as needed and for maintenance therapy.2 In patients who present with severe or difficult-to-treat asthma, other options may be considered as add-ons to inhaler therapy, such as leukotriene receptor antagonists (LTRAs), tiotropium, biologics, azithromycin, and oral corticosteroids (OCS).

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