Patients with Mild and Moderate Asthma May Not Need Daily Steroids

As Needed Adjustments by Patients Work as Well as Other Strategies

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DENVER, CO —

Patients with mild to moderate asthma may not need to take daily doses of inhaled corticosteroids, according to a new study by researchers at National Jewish Health and their colleagues in the Asthma Clinical Research Network.

The researchers, funded by the National Heart, Lung and Blood Institute, found that patients who adjusted their medication use based on symptoms fared as well as did those whose therapy was guided by physician assessment or the measurement of biomarkers in exhaled breath. They also missed fewer days of school and used less medication.

“Adjusting medication use based on symptoms is appealing because it is a simpler strategy that empowers patients,” said Richard Martin, MD, co-author of the study, which appeared in the September 12, 2012, issue of The Journal of the American Medical Association. “It also holds promise of being more responsive to changing conditions, which could help avoid worsening of the disease.”

Asthma is characterized by two hallmark symptoms: inflammation in the airways, and tightening of muscles surrounding the airways, also known as ‘twitchy’ or hyperresponsive airways. Albuterol is a short-acting medication that opens airways by relaxing muscles surrounding them. It is known as a rescue medication and is taken for short-term relief when patient feel symptoms. Inhaled corticosteroids reduce inflammation in the airways.

Current guidelines recommend that patients with intermittent asthma begin by taking albuterol on an as needed basis. If symptoms become persistent, patients are generally advised to add inhaled corticosteroids on a daily basis to better control the disease. Medication strategies are generally guided by a physician assessment of lung function and asthma control.

Inhaled corticosteroids can have side effects, including a slight reduction in growth. Many patients also find it difficult to take medications consistently on a daily basis. Differing conditions throughout a year, ranging from viral infections to pollen and weather, can affect asthma symptoms and require medication adjustments.

For those and other reasons, the researchers explored two strategies beyond physician assessment for adjusting medications to see if they might reduce medication use and achieve better asthma control.

The 9-month Best Adjustment Strategy for Asthma in the Long Term (BASALT) study enrolled 342 adult participants with mild to moderate persistent asthma at several medical centers across the nation. The participants were divided into three groups. All participants visited physicians at two, four and six weeks, then once every six weeks thereafter.

For one group, physicians evaluated asthma control and adjust therapy at every visit. A second group adjusted therapy at each visit based on levels of nitric oxide in their exhaled breath. Inflamed airways produce more nitric oxide. A third group took two puffs of inhaled corticosteroid only when shortness of breath or other symptoms induced them to take albuterol.

All three strategies produced statistically similar results on the primary measure, percentage of patients who had unscheduled medical visits, or experienced significant worsening of lung function and other measures of treatment failure.
Treatment failure occurred in 22 percent of patients following physician guidance, 20 percent for those whose therapy was guided by nitric oxide measurements, and 25 percent for those making symptom-based adjustments. Patients following physician guidance experienced significantly more treatment failures during autumn and winter, when viral infections, which can cause rapid changes in disease control, occur more often.

Patients using the symptom-based adjustment strategy used about half as much corticosteroids as did patients using the other two strategies and missed fewer days of school.

National Jewish Health is the leading respiratory hospital in the nation. Founded 120 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the media resources page.

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