DISCUSSION

Does Melanie’s Level of Asthma Control Warrant a Change in Therapy?

Melanie requires albuterol only during exercise, has no nighttime asthma except during viral illnesses, and has normal spirometry. On the other hand, her symptoms are more bothersome than her “normal” lung-function values suggest. She cannot exercise maximally. Furthermore, the patient is not satisfied with her level of functioning. These considerations suggest that Melanie is not optimally controlled on her current therapy. Additional tests may include an exercise challenge test and postbronchodilator pulmonary function tests to establish reversibility of persistent disease. The doctor suggests that Melanie switch from her leukotriene modifier to an inhaled corticosteroid. Only inhaled corticosteroids have recognized anti-inflammatory mechanisms of action. Clinical trials of single-controller therapy show that patients treated with inhaled corticosteroids experience better asthma control and, often, fewer asthma exacerbations than patients treated with leukotriene modifiers. Furthermore, in a randomized, double-blind clinical trial, patients who switched from an inhaled cortico-steroid to a leukotriene modifier compared to those who switched from 1 inhaled corticosteroid to another experienced clinical deterioration as measured by frequencies of exacerbations and discontinuations because of lack of efficacy.

What Is the Best Treatment for Melanie’s Nasal Symptoms?

The doctor diagnoses Melanie with perennial allergic rhinitis and notes that nasal obstruction is a prominent feature of her rhinitis. Nasal congestion in allergic and nonallergic rhinitis is of clinical concern because it significantly impacts patients’ daily function and quality of life. Nasal congestion interrupts sleep; causes fatigue, tiredness, irritability, and frustration; reduces productivity and concentration; and causes headache.

Furthermore, as reinforced in the 2007 National Heart, Lung, and Blood Institute guidelines for asthma management, allergic rhinitis may impact the course of asthma. The 2007 guidelines emphasize the
importance of assessing for and controlling comorbid conditions in managing asthma. Both respiratory-tract comorbidities, such as rhinitis, obstructive sleep apnea, and bronchopulmonary Aspergillosis, and other comorbidities, such as obesity and gastro-esophageal reflux disease, can interfere with asthma management. Conversely, control of these conditions can improve asthma control.

Based on an expert panel recommendation, an intranasal corticosteroid is the first line of therapy when nasal congestion is a major component of rhinitis.

**Conclusions**

Upon initiation of the inhaled corticosteroid for asthma and the intranasal corticosteroid for rhinitis, the patient’s spirometry values improve above her “normal” baseline values (FVC 126% of predicted, FEV$_1$ 125% of predicted, FEF$_{25-75}$ 119% of predicted). Furthermore, she no longer has difficulty with exercise or experiences flares during upper respiratory tract infections. She reports that she is no longer bothered by her nasal symptoms, and she has no trouble sleeping. She feels much more awake and energetic during the day.