

Asthma/COPD

ITEM 1

A 32-year-old woman with persistent asthma has shortness of breath (SOB) and wheezing that occur twice weekly. Her medical history includes allergic rhinitis, depression, and polycystic ovary syndrome. She uses her albuterol hydrofluoroalkane (HFA) inhaler twice weekly, usually when outside at the park. She wakes up at night coughing about once weekly. Her current drugs include albuterol HFA 1 or 2 puffs every 4–6 hours as needed for SOB, fluticasone/salmeterol Diskus 250/50 1 puff twice daily, loratadine 10 mg once daily for “allergies,” fluticasone nasal spray 50 mcg 2 sprays each nostril once daily, and metformin 500 mg twice daily. Sertraline 50 mg once daily was initiated 2 months before this presentation. She does not have a peak flow meter, but she follows her asthma action plan. The patient cannot remember the last time she had to visit the emergency department (ED) for an exacerbation. Which one of the following best addresses this patient’s current symptoms?

- A. Add montelukast 10 mg once daily at bedtime.
- B. Add theophylline 200 mg sustained-release tablet once daily.
- C. Discontinue fluticasone/salmeterol; initiate fluticasone 250 mcg diskus 1 puff twice daily.
- D. Discontinue fluticasone/salmeterol; initiate fluticasone 250 mcg diskus 2 puff twice daily.

ITEM 1 (Adult Asthma)

Answer A. Add montelukast 10 mg once daily at bedtime.

This patient's asthma is not well controlled (symptoms occur more than 2 days/week, bedtime symptoms occur one to three times/week, and the patient requires short-acting β -agonist (SABA) use 2 days/week). The patient may benefit from the addition of montelukast (an alternative agent) because she has allergic rhinitis (already uses intranasal steroid and daily antihistamine) and reports that the symptoms usually occur when outdoors (pollen exposure), which may mean that an allergic component is worsening her symptoms. Montelukast should not be withheld from a patient who might benefit from it, even if the patient has concomitant depression (Answer A is correct). The patient should be monitored for neuropsychiatric adverse effects. Long-acting β -agonists (LABAs) should be used for the shortest duration possible; however, this patient's symptoms are currently uncontrolled; therefore, discontinuing the LABA is not warranted (Answer C and Answer D are incorrect). Theophylline, an alternative agent, is typically considered last line (or in patients unable to use inhalation devices) and thus is not warranted (Answer B is incorrect).

1. National Heart, Lung, and Blood Institute (NHLBI). National Asthma Education and Prevention Program. Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma 2007.
2. Schumock GT, Stayner LT, Valuck RJ, et al. Risk of suicide attempt in asthmatic children and young adults prescribed leukotriene-modifying agents: a nested case-control study. *J Allergy Clin Immunol* 2012;130:368-75.