Clinical Management for the COPD Practitioner
Monday, November 13, 2023
Posttest Rationale

Aerosol Medication Delivery Bootcamp

1. In a systemic review of errors in inhaler use by trained personnel, what percentage of people made multiple inhaler use errors?
    a. 29%
    b. 49%
    c. 69%

Rationale: Sanchis et al evaluated data from 144 articles reporting on a total of 54,354 subjects performing 59,584 observed tests of technique. The overall prevalence of correct technique was 31% (28%-35%); of acceptable, 41% (36%-47%); and of poor, 31% (27%-36%).

2. Which of the following devices would not be appropriate for a 71-year-old patient with COPD that is unable to make a forceful and deep inhalation?
    a. DPI
    b. MDI or SMI
    c. Nebulizer

Rationale: The GOLD 2023 report states that dry powder inhalers are appropriate only if the patient can make a forceful and deep inhalation.

3. Which of the following devices would not be appropriate for a 68-year-old patient with COPD that is unable to coordinate between device triggering and inhalation or is not able to perform a slow, deep inhalation?
    a. DPI
    b. MDI or SMI
    c. Nebulizer

Rationale: The GOLD 2023 report states that metered-dose inhalers and, to a lesser extent, slow mist inhalers require coordination between device triggering and inhalation and patients need to be able to perform a slow and deep inhalation.

Clinical Management for the COPD Practitioner Session #1

1. A 2020 survey of 500 patients in the US published in *BCMJ* found that 46% of surveyed patients lied to their physician about smoking status or history. What did patients most commonly (75%) cite as their reason for lying?
    a. Embarrassment
    b. To avoid discrimination
    c. Didn't think the doctor would take them seriously

Rationale: The survey found that 75% of respondents that admitted to lying to their physician cited embarrassment, 31% lied to avoid discrimination, and 22% lied because they didn't think their doctor would take them seriously if they told the truth.

2. A patient that meets criteria for a diagnosis of COPD requires selection of initial treatment. The patient's primary clinical features are dyspnea and symptoms consistent with emphysema. Which of the following long-acting therapies does GOLD recommend for this patient?
   a. **LAMA + LABA**
   b. LAMA or LABA + ICS
   c. LAMA + LABA + ICS

Rationale: The GOLD treatable traits pathway utilizes clinical features to select appropriate initial therapy in patients with COPD. A patient with dyspnea, hyperinflation, emphysema features, and blood eosinophil counts <100 cells/μL is an appropriate candidate for LAMA + LABA combination therapy for initial treatment.

Clinical Management for the COPD Practitioner Session #2

1. The GOLD definition of a COPD exacerbation includes increased dyspnea and/or cough and sputum for a period of no longer than how many days?
   a. 3 days
   b. 7 days
   c. **14 days**

Rationale: GOLD defines a COPD exacerbation as an increase in dyspnea and/or cough and sputum production for a period of <14 days that may be accompanied by increased tachypnea and/or tachycardia and is often associated with increased local and systemic inflammation caused by infection, pollution, or other insults to the airways.

2. For which of the following patients do the recommendations contained in the 2023 GOLD report strongly favor the use of ICS in treatment?
   a. Patient with 1 moderate exacerbation of COPD in the previous year and blood eosinophils of 130 cells/μL
   b. **Patient with a history of hospitalizations for exacerbations of COPD and blood eosinophils of 350 cells/μL**
   c. Patient with repeated pneumonia events and a history of mycobacterial infection

Rationale: The GOLD report states that ICS use is strongly favored in patients with a history of hospitalizations for exacerbations of COPD, ≥2 moderate exacerbation of COPD per year, blood eosinophils ≥300 cells/μL, or history of or concomitant asthma.

3. A 2020 meta-analysis by Mammen et al concluded that, in patients with symptomatic COPD who complain of dyspnea and/or exercise intolerance, dual LABA/LAMA therapy is superior to either LABA or LAMA monotherapy based on reduced risk of which of the following?
   a. **Exacerbations and hospitalizations**
   b. Exacerbations and adverse events
   c. Adverse events and hospitalizations

Rationale: Based on the reviewed evidence, in patients with symptomatic COPD who complain of dyspnea and/or exercise intolerance, dual LABA/LAMA therapy is superior to either LABA or LAMA monotherapy based on the reduced risk of exacerbations and hospitalizations.