CHEST

Chronic Cough Due to Gastroesophageal Reflux in Adults

CHEST Guideline and Expert Panel Report

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BACKGROUND: We updated the 2006 ACCP clinical practice guidelines for management of reflux-cough syndrome.

METHODS: Two population, intervention, comparison, outcome (PICO) questions were addressed by systematic review: (1) Can therapy for gastroesophageal reflux improve or eliminate cough in adults with chronic and persistently troublesome cough? and (2) Are there minimal clinical criteria to guide practice in determining that chronic cough is likely to respond to therapy for gastroesophageal reflux?

RESULTS: We found no high-quality studies pertinent to either question. From available randomized controlled trials (RCTs) addressing question #1, we concluded that (1) there was a strong placebo effect for cough improvement; (2) studies including diet modification and weight loss had better cough outcomes; (3) although lifestyle modifications and weight reduction may be beneficial in suspected reflux-cough syndrome, proton pump inhibitors (PPIs) demonstrated no benefit when used in isolation; and (4) because of potential carryover effect, crossover studies using PPIs should be avoided. For question #2, we concluded from the available observational trials that (1) an algorithmic approach to management resolved chronic cough in 82% to 100% of instances; (2) cough variant asthma and upper airway cough syndrome (UACS) (previously referred to as postnasal drip syndrome) from rhinosinus conditions were the most commonly reported causes; and (3) the reported prevalence of reflux-cough syndrome varied widely.

CONCLUSIONS: The panelists (1) endorsed the use of a diagnostic/therapeutic algorithm addressing causes of common cough, including symptomatic reflux; (2) advised that although lifestyle modifications and weight reduction may be beneficial in suspected reflux-cough syndrome, PPIs demonstrated no benefit when used in isolation; and (3) suggested that physiological testing be reserved for refractory patients being considered for antireflux surgery or for those in whom there is strong clinical suspicion warranting diagnostic testing.

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KEY WORDS: cough; evidence-based medicine; gastroesophageal reflux disease; guidelines

ABBREVIATIONS: ACE = angiotensin-converting enzyme; CHEST = American College of Chest Physicians; GER = gastroesophageal reflux; GERD = gastroesophageal reflux disease; H_2RA = histamine-2 receptor antagonist; LPR = laryngopharyngeal reflux; PICO = population, intervention, comparison, outcome; PPI = proton pump inhibitor; RCT = randomized controlled trial; UACS = upper airway cough syndrome

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Summary of Recommendations and Suggestions

1. In adult patients with chronic cough, we suggest that the cough be managed according to a published management guideline that initially considers the most common potential etiologies as well as symptomatic gastroesophageal reflux (ungraded, consensus based).

Remarks: Common potential etiologies include environmental or occupational irritants, primary or secondary smoking, use of angiotensin-converting-enzyme (ACE) inhibitors, abnormal chest radiographic findings, asthma, upper airway cough syndrome due to a variety of rhinosinus conditions, nonasthmatic eosinophilic bronchitis, and suppurative lung disease. Often, more than one etiology is a contributing factor.

2. In adult patients with chronic cough suspected to be due to reflux-cough syndrome, we recommend that treatment include (1) diet modification to promote weight loss in overweight or obese patients; (2) head of bed elevation and avoiding meals within 3 hours of bedtime; and (3) in patients who report heartburn and regurgitation, proton pump inhibitors (PPIs), H_2-receptor antagonists, alginate, or antacid therapy sufficient to control these symptoms (Grade 1C).

Remarks: (1) While it is expected that GI symptoms will respond within 4-8 weeks, the literature suggests that improvement in cough may take up to 3 months.[1] b) Head of bed elevation is suggested based on its utility for improving GI GERD symptoms[2] while acknowledging that it has not been demonstrated to be beneficial for cough.

3. In adult patients with suspected chronic cough due to reflux-cough syndrome, but without heartburn or regurgitation, we recommend against using PPI therapy alone because it is unlikely to be effective in resolving the cough (Grade 1C).

4. In adult patients with chronic cough potentially due to reflux-cough syndrome who are refractory to a 3-month trial of medical antireflux therapy and are being evaluated for surgical management (antireflux or bariatric), or in whom there is strong clinical suspicion warranting diagnostic testing for gastroesophageal reflux, we suggest that they undergo esophageal manometry and pH-metry with conventional methodology (Grade 2C).

Remarks: Esophageal manometry is done both to evaluate for a major motility disorder and to accurately position the pH electrode for the pH monitoring study. With conventional methodology, the pH electrode is placed 5 cm proximal to the lower esophageal sphincter, and the study is done off antisecretory medications after withholding PPI therapy for 7 days and H_2 receptor antagonists for 3 days prior to the study. It was agreed by consensus of the Esophageal Diagnostic Advisory Panel composed of both gastroenterologists and surgeons[3] that this is the only methodology with proven validity with respect to surgical outcomes.

5. In adult patients with chronic cough and a major motility disorder (eg, absent peristalsis, achalasia, distal esophageal spasm, hypercontractility) and/or normal acid exposure time in the distal esophagus, we suggest not advising antireflux surgery (Grade 2C).

Remarks: Under the circumstances of a major motility disorder or normal esophageal acid exposure on esophageal pH-metry, there is no supportive controlled data for antireflux surgery and there is quantifiable risk to the procedure making for an unacceptable risk-benefit ratio.[3,4]

6. In adult patients with chronic cough, adequate peristalsis, and abnormal esophageal acid exposure determined by pH-metry in whom medical therapy has failed we suggest antireflux (or bariatric when appropriate) surgery for presumed reflux-cough syndrome (Grade 2C).

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