Adult Acute Exacerbation of Chronic Bronchitis (AECB) Outpatient Guideline

EVALUATION AND TREATMENT

Adult Patient Presents with Signs/Symptoms of Chronic Bronchitis

Chronic bronchitis is a form of Chronic Obstructive Pulmonary Disease (COPD) and is defined by the presence of chronic cough for 3 months in each of 2 successive years in patients in which other causes of chronic cough have been excluded.

Present Symptoms

Evaluate the number of symptoms present:

- Increased cough (frequency or severity)
- Change in sputum volume or character
- Increased dyspnea from baseline

Mild
1 Symptom Present

- **Antibiotics are NOT recommended**
- Consider use of corticosteroids and/or adjustment of short-term β-agonist and short-term anti-cholinergic agents

Moderate to Severe
≥ 2 Symptoms Present

- Evaluate status of Chronic Obstructive Pulmonary Disease (COPD); refer to *Sanford Adult Chronic Obstructive Pulmonary Disease (COPD) Practice Guideline*
- In all patients with moderate to severe exacerbation, consider use of corticosteroids and/or adjustment of short-term β-agonist and short-term anti-cholinergic agents

Uncomplicated COPD

- Age < 65 years
- FEV_1 > 50% predicted
- < 3 exacerbations/year
- No cardiac disease

Antibiotic* Treatment

- Azithromycin (Zithromax) 500 mg PO once, then 250 mg daily for 4 days

OR

- Cephalosporin (cefuroxime, cefpodoxime, or cefdinir)

OR

- Doxycycline 100 mg PO two times a day

OR

- TMP-sulfa (Bactrim, Septra) DS 1 tab PO two times a day

Complicated COPD

One or more risk factors are present:

- Age > 65 years
- FEV_1 < 50% predicted
- ≥ 3 exacerbations/year
- Hospitalized AECB
- Cardiac disease
- Use of supplemental oxygen
- Chronic systemic corticosteroid use

Evaluate Pseudomonas Risk

Patient at risk for Pseudomonas if any of the following are present:

- Hospitalization for ≥ 2 days in preceding 90 days
- ≥ 4 courses of antibiotics within the past year
- Moderate to severe COPD (FEV_1 < 50% predicted)
- Previous Pseudomonas infection or colonization
- Systemic glucocorticoid use

Risk For Pseudomonas Is Not Present

Antibiotic* options include:

- Levofloxacin (Levaquin) 500 mg PO daily

OR

- Moxifloxacin (Avelox) 400 mg PO daily

OR

- Amoxillicin-clavulanate (Augmentin) 875 mg PO two times a day

Risk For Pseudomonas Is Present

Obtain sputum culture

Antibiotic* options include:

- Levofloxacin (Levaquin) 750 mg PO daily

OR

- Ciprofloxacin (Cipro) 750 mg PO two times a day

PLUS

Amoxillicin-clavulanate (Augmentin) 875 mg PO two times a day

* If patient has had antibiotics in preceding 3 months, use an alternate class.

The antibiotic doses listed may require adjustment for individual patient's renal function.

The recommended duration of antibiotic treatment is 5-7 days for all antibiotics used.

Revised 04162014 ARR

REFERENCE INFORMATION

Clinical Pearls

- The most frequent causes of AECB are respiratory infection and air pollution, but up to one-third of severe exacerbations do not have an identifiable etiology
- There are no lab or radiographic tests to confirm the diagnosis of AECB
- Inhaled bronchodilators (particularly β2-agonists with or without anti-cholinergics) and oral glucocorticoids (5-14 day course) are effective treatments
- Sputum cultures should not be routinely obtained unless the patient has failed initial antibiotic therapy or there are risk factors for Pseudomonas identified
- Mucolytics and methylxanthines are not beneficial in COPD exacerbations
- Systemic antibiotics are mainstay treatments for AECB in moderate to severe COPD
- Prevention and management of AECB is an important part of managing COPD. Please refer to *Sanford Adult Chronic Obstructive Pulmonary Disease (COPD) Practice Guideline* for further assistance.

References

1. Sethi, S., Murphy, T. (2004). Acute exacerbations of chronic bronchitis: New developments concerning microbiology and pathophysiology-impact on approaches to risk stratification and therapy. *Infectious Disease Clinics of North America,* 18:861.
2. *The Global Strategy for the Diagnosis, Management and Prevention of COPD*, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2010. http://www.goldcopd.org. Accessed August 19, 2011.