Management of a COPD Exacerbation

A. Outpatient

1. Beta agonists short acting
2. Prednisone 40 mg daily (or equivalent) for 5 days (1, 2)
3. Antibiotics- not universally indicated for outpatient management, though patients treated with antibiotics as outpatient for COPD exacerbation have lower relapse rate than those not given antibiotics (3).
    a. GOLD recommends in patients with moderate to severe exacerbations marked by 2 of the following 3 symptoms: increased dyspnea, increased cough volume or increased cough purulence. (4)
    b. In uncomplicated patients (none of the following risk factors: <65 years old, FEV1 > 50%, < 2 exacerbations a year, no ischemic cardiac disease), recommend targeting likely pathogens (Haemophilus influenza, Moraxella catarrhalis, Streptococcus pneumonia): macrolide (azithromycin), doxycycline, bactrim or cephalosporin for 5-7 days in uncomplicated patients (4).
    c. In complicated patients (one or more risk factor: <65 years old, FEV1 > 50%, < 2 exacerbations a year, no ischemic cardiac disease) use a respiratory quinolone (levofloxacin or moxifloxacin) or augmentin. If suspect pseudomonas, consider ciprofloxacin, depending on local resistance patterns(5).

B. Inpatient

1. Oxygen- titrate to SpO2 88-02% (results in lower mortality than non-titrated oxygen) (6).
2. Beta agonsist (albuterol 2.5 mg in 3 ml) nebulized or 4-8 puffs (90 mcg per puff) every 1-4 hours as needed. Use air with nebulizer or limit oxygen derived treatments to six minutes to avoid hypercapnea (7, 8).
3. Prednisone 40 mg a day for 5 days. No proven benefit to longer duration or IV. Though most accept using IV steroids in severe CODP exacerbation particularly if marked by respiratory failure. (9)
4. Antibiotics should be used (Rothberg MB et al JAMA 2010- Abx improves mortality and readmission for copd and need for subsequent MV). Especially for patients on a MV or admitted to an ICU. (10, 11)
5. For respiratory failure, non-invasive ventilation (NIV) is preferred over intubation decreased mortality and subsequent intubation rates (12)
6. Post hospitalization, GOLD recommends follow up visit within 30 days and at 3 months to reduce re-admission, ensure return to baseline, evaluate for co-morbidities and consider preventive medications

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