Health PEI Empiric Antimicrobial Management of Acute Exacerbation of Chronic Obstructive Pulmonary Disease

Criteria

- Antimicrobial therapy is only recommended in patients with AECOPD exhibiting all 3 cardinal symptoms; those who have 2 of 3 cardinal symptoms if increased sputum purulence is one of them; or those who require mechanical ventilation (invasive or non-invasive).
  - Cardinal symptoms:
    1. Increased dyspnea
    2. Increased sputum volume
    3. Increased sputum purulence
- If patient has been on antimicrobial therapy in the last 3 months (regardless of clinical success) the therapy chosen should be a regimen based on a different mechanism of action.

Disease Stratification	Acute Bronchitis	Simple[1] (Low-risk patients)	Complicated[2] (High risk patients)	Patients at risk for *P. aeruginosa*[3]
Likely Pathogen	Generally viral	*Streptococcus pneumoniae* *Haemophilus influenzae* *Moraxella catarrhalis*	As with simple PLUS: Gram-negatives, increased beta-lactam resistance	As with simple PLUS: *Pseudomonas aeruginosa*
Preferred Therapy	Antimicrobial therapy not recommended (May provide symptom management)	1. **doxycycline** 100 mg PO BID OR 2. **cefuroxime** 500 mg PO BID	1. **amoxicillin/clavulanate** 500 mg PO TID OR 2. **cefuroxime** 500 mg PO BID IV option: **ceftriaxone** 1-2 g IV q24h	1. **cefuroxime** 500 mg PO BID PLUS **ciprofloxacin** 750 mg PO BID IV option: **cefuroxime** 750 mg IV q8h PLUS **ciprofloxacin** 400 mg IV q12h
Alternative Therapy	n/a	1. **clarithromycin** 500 mg PO BID OR 2. **sulfamethoxazole/ trimethoprim** 800/160 mg PO BID	**levofloxacin** 500 mg PO daily IV option: **levofloxacin** 500 mg IV q24h	*If patient received a fluoroquinolone in the past 6 mths*: **piperacillin-tazobactam** 4.5 g IV q6h
Duration	n/a	5 days	5 - 7 days	10 - 14 days

1. Simple (low risk) patients: No risk factors. Patient characteristics include: age less than 65 years, FEV1 greater than 50% predicted, less than 4 exacerbations/year, no cardiac disease, no radiographic evidence of pneumonia.

2. Complicated (high risk) patients: At least 1 of: age greater than 65 years, FEV1 less than 50% predicted, 4 or more exacerbations/year, cardiac disease, use of home oxygen, chronic use of corticosteroids, antibiotic use in past 3 months. Choose 7 days of therapy if patient is on chronic steroids.

3. Patients at risk for *Pseudomonas aeruginosa* infection: Risk factors: FEV1 less than 35% predicted, bronchiectasis, recent hospitalization, or multiple courses of antibiotics. Two anti-pseudomonal agents are generally not required due to local susceptibilities and lack of severe infectious disease. Choose 10 days of therapy for suspected pseudomonas or 14 days if known bronchiectasis.

References

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