Clinical Topic 3: Management of Acute Cough or Acute Bronchitis

Background

The term 'chest infection' is used to describe a wide range of lower respiratory tract infections. For the purposes of this document, acute bronchitis or cough is a mild, usually self limiting illness that can follow another RTI where there is no underlying chronic lung disease. Symptoms can include cough, copious and / or coloured sputum, breathlessness or wheeze. Cough usually lasts for 7 to 10 days but can persist for up to 3 weeks. Sometimes cough lasting from around 3-8 weeks is known as sub acute or post viral cough and at 8 weeks it is generally considered chronic but this is beyond the scope of this document.

It is important to acknowledge that pneumonia can be life threatening but outcomes can be substantially improved with antibiotics; and it can be difficult to differentiate between pneumonia and other causes of lower RTI.

When *not* to prescribe an antibiotic?

- When the patient is an otherwise healthy, non-elderly adult who presents with cough

AND

- Thorough clinical examination confirms there are no new focal chest signs and all vital signs are normal
- Sputum purulence alone is **not** an indication for antibiotics in a previously well patient with no chest signs

When to consider prescribing an antibiotic?

- When the patient is systemically very unwell
- When the patient has symptoms and signs of serious complications
- When the patient is at high risk of serious complications due to serious co-morbidity
- When the patient is aged 65 or older
- Where community acquired pneumonia is suspected, antibiotic treatment should be commenced without delay, and assessment of the CRB-65 score is essential (see Table 1). One point is awarded for each of the following features: **C**onfusion — recent; **R**espiratory rate of 30 breaths/min or greater; **B**lood pressure — systolic of 90 mmHg or less or diastolic of 60 mmHg or less; and **65** years or older.
- Local policy where antibiotics are required for non pneumonic chest infection in adults
    - Amoxicillin 500mg three times a day for 5 days
    - OR Doxycycline 200mg stat then 100mg daily for 5 days in total in penicillin allergy
- Local policy for community acquired pneumonia treatable in the community is
    - Amoxicillin 1g three times a day for 7 days
    - OR Doxycycline 200mg day 1 then 100mg daily for 7 days in total in penicillin allergy

Other management strategies

- There is little evidence to support the use of proprietary cough preparations, although simple demulcents such as glycerine based preparations may be considered.
- There is little evidence to support the use of oral or inhaled β_2 agonists in adults or children with acute cough or bronchitis and no underlying pulmonary disease.[1]
- Analgesics may be used if required.

Points of note

- The presence of bacterial or viral infection can lead to the production of coloured sputum and is not an indication for antibiotic treatment in the absence of COPD.[2]
- Reconsultation is common in LRTI with around 30% of patients reconsulting for similar symptoms within the next 28 days.[3]
- Acute cough can be caused by ACE inhibitors and this should be considered during the initial assessment.

Patient information

- Cough usually lasts for 7-10 days but can persist for 3 weeks[4] with or without antibiotics.
- Try to avoid smoking or smoky atmospheres.
- If antibiotics are given, take them regularly and complete the treatment. Analgesia may still be required in the first few days of treatment.
- Drink plenty of fluids
- Rest if you feel tired

What should we do in practice?

- All patients should be advised on symptomatic management of their cough and the expected duration of symptoms.
- CRB-65 scores (see table 1) should be assessed and documented where pneumonia is suspected.
- Peer review and audit of management of cough or acute bronchitis is encouraged.

Table 1: Use of CRB-65 score[5]

Risk	CRB-65 score	30 day mortality	Admit?*
Low	0-1	0-1%	Usually treat at home
Intermediate	2	8-9%	Consider hospital referral
High	3-4	22-23%	Urgent hospital admission

*The CRB-65 score should not be the sole deciding factor when consider whether to admit a patient. Other factors include, but are not limited to, the person's wishes, their social support, other pre-existing conditions, pregnancy and frailty

[1] Becker LA, Hom J, Villasis-Keever M, van der Wouden JC. Beta2-agonists for acute bronchitis. *Cochrane Database of Systematic Reviews* 2011, Issue 7. Art. No.: CD001726.DOI:10.1002/14651858.CD001726.pub4. http://onlinelibrary.wiley.com/o/cochrane/clsysrev/articles/CD001726/frame.html

[2] Gonzales R, Bartlett JG, Besser RE, et al. Principles of appropriate antibiotic use for treatment of uncomplicated acute bronchitis:background. Ann Intern Med 2001;134:521-9.

[3] Holmes WF, MacFarlane JT, MacFarlane RM et al. The influence of antibiotics and other factors on reconsultationf or acute lower respiratory tract illness in primary care. Br J Gen Pract 1997;47:815-8.

[4] Morice AH, McGarvey L, Pavord I on behalf of the British Thoracic Society Cough Guideline Group. Recommendations for the management of cough in adults. *Thorax* 2006:6(Suppl 1);i1-i24.

[5] Data from Lim WS et al. Defining community acquired pneumonia severity on presentation to hospital: an international derivation and validation study. *Thorax* 2003;**58:**377-382.