

Managing Cough in Primary Care

Introduction

The British Thoracic Society has produced guidelines for the management of cough in adults in 2006¹ and in children in 2008.² This opinion sheet outlines the main points relevant to primary care. Acute cough is defined as recent onset cough lasting less than three weeks, and chronic cough as cough lasting more than eight weeks.

Acute cough

Acute cough is the commonest new presentation in primary care and is usually due to a self-limiting viral-induced infection lasting 2-3 weeks, often associated with upper respiratory tract symptoms. Table 1 shows alternative diagnoses in children with suggestive features.

In adults the most common cause of

cough is a self-limiting viral infection. The presence of systemic disease such as fever associated with localised chest signs increases the likelihood of bacterial bronchitis and pneumonia, and should prompt the use of antibiotics. Acute cough may be the first presentation of a chronic lung disease such as asthma or COPD and can also be caused by inhalation of noxious fumes /gases (including passive smoking). “Red flag symptoms” associated with acute cough which might prompt urgent referral and or chest x-ray are:

- Haemoptysis
- Weight loss
- Chest pain
- Fever
- Tachypnoea (> 25breaths/min)

Treatment of self-limiting viral-

induced cough is supportive.

Antibiotics or inhaled bronchodilators are not recommended in these circumstances and there is little or no evidence for over the counter (OTC) preparations. Recently, the Medicines and Healthcare Products Regulatory Agency (MHRA) has banned the use of many such preparations in children under the age of 6.³ The use of simple honey and lemon linctus is recommended. Inhalation of menthol may give short-term relief.

Chronic or recurrent cough in children

Most cases of chronic or recurrent cough are due to recurrent viral bronchitis or post viral cough in otherwise healthy children. A history of “whoop” or vomiting with the cough should raise the possibility of Pertussis infection. Table 2 shows alternative diagnoses.

Treatment is supportive in the case of viral cough. Macrolide antibiotics may help prevent the spread of Pertussis if given early in the course of the disease. Chronic bacterial bronchitis may need a prolonged (4-6 weeks) course of antibiotics.

Chronic or recurrent cough in adults

Chronic or recurrent cough in adults Chronic cough is reported by 10-20% of adults and is more common in females and overweight people. It is aggravated by environmental factors, particularly tobacco smoke. It is a common presentation of serious lung pathology especially in the presence of significant sputum production

Table 1. Differential diagnoses of acute cough in children.

Features of cough	Possible diagnosis(es)
Associated coryzal symptoms, lack of fever, lack of systemic upset	Self-limiting viral infection.
Associated fever, tachypnoea* localised chest signs	Pneumonia(consider Chest x-ray if uncertain)
Stridor, croupy cough	Viral croup
Acute onset ± choking, asymmetrical chest signs	Foreign body
Progressive cough after 2-3 weeks.	Whooping cough, pneumonia, TB (consider chest x-ray)
Background of failure to thrive, night sweats, clubbing plus features of chronic cough (see below)	Acute presentation of chronic lung disease
“Clearing of throat” in hayfever season	Cough due to allergic rhinitis.

*Tachypnoea defined as Respiratory rate >40/min (over 1 year) >50/min (2-12months) > 60/min (under 2 months)

Table 2. Non –viral causes of chronic cough in children

Cause	Suggestive features/comments
Asthma	Past /Family history atopic disease, associated wheeze, diurnal variation in symptoms. Reversible airways obstruction in older children
Allergic rhinitis	Ask about family history of atopy and presence of sneezing/itching of nose
Psychogenic	Characteristic “honking” sound. Tends to occur in older children and goes away at night
Cough variant asthma	Cough with diurnal variation ,without wheeze on atopic background. Responds to 4-8 weeks of inhaled corticosteroid therapy.*
Pneumonia, bacterial bronchitis. TB	Consider if persistent wet cough, systemically unwell, worsening acute cough ,localised chest signs. A chest x-ray is indicated if there is diagnostic doubt
Cystic fibrosis	Associated wheeze, neonatal onset, failure to thrive
Congenital abnormalities	Cough starting in the first few days of life should be referred for further investigation
*After the trial of therapy the inhaled corticosteroids should be withdrawn to ascertain if any improvement with therapy was due to that therapy or due to chance.	

Table 3. Common causes of Cough in adults with a normal chest x-ray

Cause	Comments
Asthma: Classical asthma Cough variant asthma	Associated with wheeze, shows reversible airways obstruction when symptomatic, airways hyper-responsiveness. Isolated cough that exhibits diurnal variation and occurs with asthma triggers such as exercise, cold. A 4-8 week trial of therapy with inhaled corticosteroid or 2 week course of oral steroid can help diagnosis
Drugs: especially angiotensin converting enzyme (ACE) inhibitors	More common in East Asian ethnicity and smokers. Median time to cough resolution after withdrawal 26 days.
Reflux disease	Cough worse on rising in the morning. Worse on eating or phonation. May need 3 months of high dose proton pump inhibitor (PPI) treatment.
Upper Airways Disease	Ask about symptoms of rhinosinusitis. A diagnostic trial of intranasal steroids for 4-8 weeks may help

and/or haemoptysis. One primary care study showed that 46% of patients presenting with chronic cough had a final diagnosis of asthma or COPD.

The initial evaluation should include an occupational, drug and smoking history. All patients should have spirometry and a chest x-ray. Table 3 shows the main causes of cough in patients with a normal chest x-ray.

Treatment of chronic cough is directed at the specific cause and removal of environmental irritants especially tobacco smoke. In addition to non-specific measures (see under “acute cough”, mucolytic drugs may help patients with COPD with sticky sputum. Strong opiate linctus (e.g morphine) can be particularly helpful for the management of cough in palliative care.

References

- 1.Recommendations for the management of cough in adults .A H Morice, L McGarvey, I Pavord, on behalf of the British Thoracic Society Cough Guideline Group. *Thorax* 2006;**61**(Suppl 1):i1–i24.
2. Recommendations for the assessment and management of cough in children. M D Shields, A Bush, M L Everard, S McKenzie, R Primhak, and on behalf of the British Thoracic Society Cough Guideline Group. *Thorax* 2008;**63**(Suppl III):iii1–iii15.
3. MHRA Safety warning. Children's over-the-counter cough and cold medicines: New advice 28 February 2009. Available from: <http://www.mhra.gov.uk/Safetyinformation/Safetywarningsalertsandrecalls/Safetywarningsandmessagesformedicines/CON038908>. Last accessed 22/06/09.

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