Management of adult lower respiratory tract infection in primary care

K Steele, G Gormley, C H Webb

Acute lower respiratory tract infection (acute bronchitis) refers to the onset of productive cough in a patient with no history of chronic obstructive pulmonary disease and no evidence of pneumonia. The Fourth National Morbidity Survey (1991–2) from general practice claims that acute cough is the most common reason given for consulting a GP in the UK. Population based estimates of the incidence of acute bronchitis range from 33 to 45 cases/1000 per year. Descriptive epidemiology of common symptoms and their natural history and outcome is an area which the MRC highlights as a priority for primary care research. In this issue of Thorax Macfarlane et al report a large prospective case series detailing the incidence, aetiology, management, and outcome of previously well adults presenting to their general practitioner with symptoms of acute lower respiratory tract infection. They found there was no relationship between the doctor’s initial clinical assessment that the patient had an infection warranting antibiotics and the outcome or with subsequent laboratory confirmation of a bacterial/atypical infection. They found there was no relationship between the doctor’s initial clinical assessment that the patient had an infection warranting antibiotics and the outcome or with subsequent laboratory confirmation of a bacterial/atypical infection.

Quantitative systematic reviews of randomised controlled trials of antibiotic prescription for acute bronchitis do not support antibiotic treatment. The most beneficial effect seen in some patients is balanced by adverse side effects in others. Given this body of evidence, why is it that up to 80% of patients with symptoms of acute lower respiratory tract infection with symptoms of acute lower respiratory tract infection present to their general practitioner with symptoms of acute lower respiratory tract infection with symptoms of acute lower respiratory tract infection? Why do doctors prescribe antibiotics when they see no clinical indication? They also found that this desire may be for a prescription of a relatively harmless medication (with potential benefit) compared with the risk of patient dissatisfaction and litigation may tip the balance towards defensive practice.

Macfarlane et al claim that microbiological investigations did not influence the clinical outcome and their routine use in acute bronchitis in healthy adults would not be justified. However, such investigations have an epidemiological value in providing local data on antibiotic resistance and seasonal variation in pathogen prevalence. Both are important considerations in deciding on the empirical management of more severe lower respiratory infections in the community. This could be achieved by investigating a representative sample of patients or through the use of sentinel practices. The prevalence of ampicillin resistance in Haemophilus influenzae and Streptococcus pneumoniae infections shows local and regional variations and that recorded by Macfarlane et al is exceptionally low. The volume of antibiotic use drives antibiotic resistance and this correlation has been shown to occur in local practice communities. Recent antibiotic prescription increases the prevalence of carriage and infection due to penicillin resistant S pneumoniae. Since 50% of human community antibiotic use in the UK is for respiratory infections, prudence in their management carries with it the greatest potential to reduce the pressure which drives resistance. This applies not only to the agents prescribed, but also to simultaneous co-selection of resistance to other valuable antibiotics.

We suggest three strategies for disseminating the evidence base for management of acute bronchitis in the community. Firstly, a public education campaign to support doctors’ prescribing practice. Secondly, education of GPs to provide them with the evidence to reassure them that antibiotics are not warranted. Dissemination of evidence, particularly if supported by laboratory liaison, decreases prescribing of antibiotics. We also need to spend time, which is valued by patients, to explain why antibiotics have been used in the past and why they are not being given for the current illness. The use of delayed prescriptions and patient information leaflets have both been shown to decrease prescribing of antibiotics and to reduce reconsultations. We suggest three strategies for disseminating the evidence base for management of acute bronchitis in the community. Firstly, a public education campaign to support doctors’ prescribing practice. Secondly, education of GPs to provide them with the evidence to reassure them that antibiotics are not warranted. Dissemination of evidence, particularly if supported by laboratory liaison, decreases prescribing of antibiotics. We also need to spend time, which is valued by patients, to explain why antibiotics have been used in the past and why they are not being given for the current illness. The use of delayed prescriptions and patient information leaflets have both been shown to decrease prescribing of antibiotics and to reduce reconsultations.
The paper by Macfarlane et al should encourage GPs, enabling them to reassure patients that withholding antibiotics has a positive outcome for this self-limiting condition.

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