

intranasal steroids as our first-line treatment for allergic rhinitis.

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■ ANTIBIOTICS FOR ACUTE BRONCHITIS: A META-ANALYSIS

Smucny JJ, Becker LA, Glazier RH, McIsaac W. Are antibiotics effective treatment for acute bronchitis? A meta-analysis. *J Fam Pract* 1998; 47:453-60.

Clinical question Are antibiotics an effective treatment for acute bronchitis?

Background Acute bronchitis is a common diagnosis in primary care and is often treated with antibiotics. Recently, increased antibiotic resistance, concern about cost, recognition of viral etiologies, and the risk of adverse effects have contributed to the growing consensus that antibiotic treatment for acute bronchitis is unnecessary. Clinical trials of acute bronchitis have demonstrated mixed results using patient-centered outcomes following antibiotic treatment.

Population studied The authors performed a meta-analysis of 9 studies with a total of 779 patients aged 8 years or older. The study subjects were otherwise healthy and had an acute productive cough without evidence of pneumonia. All of the studies were randomized, double-blinded, and placebo controlled and excluded patients who had any preexisting pulmonary conditions.

Study design and validity Studies were identified by English language-only searches of MEDLINE, EMBASE, and the Cochrane Controlled Trials Register, as well as a manual search of reference lists and the Science Citation Index. The authors used a standardized scoring system to assess the methodologic quality of the trials. They extracted the data and calculated summary outcome measures using a random-effects model. Although 9 studies were identified, they did not all use similar outcomes. As a result, the authors calculated each summary outcome using only a subset (3 to 6) of the trials. A sensitivity analysis, which examines bias in the way studies are excluded in a meta-analysis, was not performed. A heterogeneity test, which assesses the comparability of the included studies, was performed, but the results were not reported.

Outcomes measured The primary outcomes were patient-oriented: presence and duration of cough, activity limitation, feelings of illness, physician's assessment of improvement at 7 to 11 days, and adverse effects of antibiotic therapy.

Results Of 384 studies identified, only 9 met the authors' criteria for meta-analysis. Summary outcomes demonstrated that antibiotic treatment reduced the likelihood of cough at 7 to 11 days' follow-up (relative risk [RR] = 0.69; 95% confidence interval [CI], 0.49 - 0.98; number needed to treat [NNT] = 5) and improved the physician's clinical impression at 7 to 11 days' follow-up (RR for being unimproved = 0.5; 95% CI, 0.3 - 0.9; NNT = 18). Antibiotics also decreased the duration of productive cough by a weighted mean difference of 0.6 days (95% CI, -1.1 to -0.04 days). Treatment with antibiotics, however, did not significantly decrease activity limitation or feelings of illness. There was a nonsignificant increase in the incidence of adverse effects with antibiotic treatment. After reviewing the studies, the authors found no clear benefit of antibiotic therapy for any particular subgroup (those who smoke, are older than 55 years, have a presence of purulent sputum, and so forth).

As the authors note, this meta-analysis was limited by the lack of comparability of the trials and outcome measures. In addition, the limitation to studies written in English, the absence of a sensitivity analysis, and the strong possibility of reporting and publication bias (because the authors of the original studies did not report or publish nonsignificant findings) call the results of this meta-analysis into question.

Recommendations for clinical practice Although this study demonstrated a marginal benefit of antibiotics on the presence and duration of cough in patients with acute bronchitis, the methodologic concerns, the risk of adverse effects of antibiotic treatment, and the global risk of increasing antibiotic resistance should continue to sway clinicians away from prescribing antibiotics for patients with acute uncomplicated bronchitis.

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■ HORSE-CHESTNUT SEED EXTRACT FOR CHRONIC VENOUS INSUFFICIENCY

Pittler MH, Ernst E. Horse-chestnut seed extract for chronic venous insufficiency. *Arch Dermatol* 1998; 134:1356-60.

Clinical question Does horse-chestnut seed extract (HCSE) reduce symptoms of chronic venous insufficiency?

Background Chronic venous insufficiency (CVI) is a common medical problem that occurs in 10% to 15%