

therapy might cause more harm than good and should not be routinely prescribed.

Further studies are needed that address the benefits and risks of aspirin use in women, non-white people, and those at increased risk for hemorrhagic stroke.

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■ INTRANASAL STEROIDS OR ANTIHISTAMINES FOR ALLERGIC RHINITIS?

Weiner JM, Abramson MJ, Puy RM. Intranasal corticosteroids versus oral H₁ receptor antagonists in allergic rhinitis: systematic review of randomized controlled trials. *Br Med J* 1998; 317:1624-9.

Clinical question Are intranasal corticosteroids more effective than oral antihistamines for the treatment of allergic rhinitis?

Background Treatment for allergic rhinitis is a common reason for primary care visits. While intranasal corticosteroids are generally considered more effective than oral antihistamines for nasal symptoms, oral antihistamines are still more frequently prescribed (see the list at www.rxlist.com/top200.htm). Intranasal corticosteroids are also thought to be less effective for comorbid ocular symptoms.

Population studied In this meta-analysis, the authors identified 16 trials with 2267 patients that compare one of several intranasal corticosteroids to any oral antihistamine for the treatment of nasal, ocular, and global symptoms of allergic rhinitis. No information is given regarding the settings of the original studies.

Study design and validity This meta-analysis of randomized controlled trials is well done. The question is clearly defined, and it addresses a problem that is common in primary care. The proposed intervention (steroid nasal sprays) is feasible. The search strategy is thorough, using 2 separate databases (MEDLINE and the European EMBASE). Although citations in review articles and abstracts from conferences were investigated, no mention is made of a search for unpublished studies. The authors clearly define their inclusion and exclusion criteria for the review. The quality of the included studies is assessed and classified according to the criteria of the Cochrane Collaboration. Two reviewers performed this quality assessment independently. Heterogeneity of results was found for several end points (significant variation in outcomes between studies), and the

authors appropriately conducted sensitivity and subgroup analyses in an attempt to explain this.

Outcomes measured The effectiveness of treatment on the patient-oriented outcomes of nasal symptoms (blockage, discharge, sneezing, itch, postnasal drip, total nasal symptom score), eye symptoms, and systemic or global symptoms was reported.

Results Intranasal steroids were superior to oral antihistamines for all patient-oriented nasal symptom outcomes. Results were reported as the standard mean difference (SMD) in symptom scores, a statistical method allowing scores from different survey instruments and scales to be pooled. The SMD represents the mean difference in symptom score for patients receiving intranasal steroids compared with patients receiving oral antihistamines, expressed in units of the standard deviations of those scores. Fourteen trials considered nasal blockage, discharge, and sneezing, giving SMDs of -0.63, (95% confidence interval [CI], -0.73 to -0.53), -0.50 (95% CI, -0.60 to -0.40), and -0.49 (95% CI, -0.59 to -0.39), respectively. In the 11 trials considering nasal itch, intranasal steroids resulted in an SMD of -0.38 (95% CI, -0.49 to -0.21). Postnasal drip was studied in 2 trials, showing an SMD of -0.238 (-0.42 to -0.06.) Nine studies reported a total nasal symptom score, with an SMD -0.42 (95% CI, -0.53 to -0.32). Only one trial studied nasal resistance, and it found no difference between treatments.

Eye symptoms were reported by 11 studies. There was no statistically significant difference between intranasal steroids and oral antihistamines, with an SMD of -0.04 (95% CI, -0.16 to 0.07). Global ratings were reported by 2 studies. The results are expressed as the odds for deterioration or no change in symptoms in the intranasal steroid group versus the oral antihistamine group. This odds ratio is 0.26 (95% CI, 0.08 - 0.8) and favors intranasal steroids. Heterogeneity of results was found only for the symptoms of sneezing, total nasal symptoms score, and ocular symptoms. Subgroup analysis showed that this heterogeneity was probably not due to the use of different steroids and antihistamines between the trials.

Recommendations for clinical practice This meta-analysis supports the generally held belief that intranasal corticosteroids are more effective than oral antihistamines for the common nasal symptoms of allergic rhinitis. However, the lack of difference found for ocular symptoms suggests that our traditional regard of antihistamines as the superior treatment for these symptoms may be wrong. Given the higher effectiveness, lower cost, and general bias toward topical or local treatments over systemic ones, we should use

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%