POEMs

No Benefit with Addition of TMP/SMX to Cephalexin for Nonpurulent Cellulitis

Clinical Question

Does the addition of trimethoprim/sulfamethoxazole (TMP/SMX) to cephalexin (Keflex) increase the rate of cure for uncomplicated cellulitis?

Bottom Line

Compared with cephalexin alone, covering for methicillin-resistant *Staphylococcus aureus* (MRSA) and streptococci with cephalexin plus TMP/SMX does not improve rates of clinical cure when treating nonpurulent cellulitis. However, a trend favoring the combination regimen was found in a modified intention-to-treat population in this study, so further research may be required. (Level of Evidence = 1b)

Synopsis

Guidelines from the Infectious Diseases Society of America recommend treating nonpurulent cellulitis with an antibiotic that is active only against streptococci. However, in practice, clinicians often prescribe an antibiotic regimen that includes activity against MRSA. Using concealed allocation, these investigators randomized 500 patients who presented to the emergency department with nonpurulent, uncomplicated cellulitis to receive a seven-day course of cephalexin plus TMP/SMX or cephalexin plus matching placebo. Bedside ultrasonography was used to exclude patients with abscess. The primary outcome was clinical cure at 14 to 21 days in the per-protocol group (those who took at least 75% of the study medication during the first five days and had an in-person follow-up at 14 to 21 days, or those who took at least 75% of the study medication during the first 48 hours but had clinical failure). No significant difference was detected, with approximately 85% clinical cure in both groups.

In the modified intention-to-treat population of patients who took at least one dose of study medication and were followed up at 14 to 21 days, there was a trend toward greater clinical cure in the cephalexin plus TMP/SMX group (76% vs. 69%; difference = 7.3%; 95% confidence interval, −1.0% to 15.5%; $P = .07$). Although this difference was not statistically significant, the 95% confidence interval includes the minimal clinically important difference of 10%, suggesting a possible benefit. Adverse events, which were reported as mild 90% of the time, were not different between the two groups.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Emergency department

Reference: *Moran GJ, Krishnadasan A, Mower WR, et al. Effect of cephalexin plus trimethoprim-sulfamethoxazole vs cephalexin alone on clinical cure of uncomplicated cellulitis: a randomized clinical trial.* JAMA. *2017;317(20):2088-2096.*

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Steroid Treatment Adds No Benefit to Antihistamines for Acute Hives

Clinical Question

In patients presenting with acute urticaria, is combination antihistamine/corticosteroid treatment more effective than antihistamine alone?

Bottom Line

The combination approach of steroids and antihistamines offers no added benefit to antihistamines alone for the treatment of simple urticaria. (Level of Evidence = 1b–)

Synopsis

The investigators enrolled 100 adults who presented to an emergency department with a generalized rash for less than one day with fleeting wheals and itching but without ▶

angioedema or anaphylaxis. All patients were treated with the antihistamine levocetirizine (Xyzal), 5 mg daily for five days, and they were all randomized, using concealed allocation, to additionally receive placebo or prednisone, 40 mg daily for four days. On follow-up by telephone, 62% of patients treated with antihistamine/prednisone and 76% receiving antihistamine/placebo were asymptomatic (difference not significant). Relapse of urticaria was similar in both groups. The study had 80% power to find a difference of 28 percentage points if a difference existed, and analysis was by intention to treat.

Study design: Randomized controlled trial (double-blinded)

Funding source: Foundation

Setting: Emergency department

Reference: *Barniol C, Dehours E, Mallet J, Houze-Cerfon CH, Lauque D, Charpentier S. Levocetirizine and prednisone are not superior to levocetirizine alone for the treatment of acute urticaria: a randomized double-blind clinical trial.* Ann Emerg Med. *2017;pii:S0196-0644(17)30264-0.*

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Corticosteroid Injections Ineffective for Knee Osteoarthritis

Clinical Question

Do intra-articular corticosteroids improve pain and function and decrease cartilage loss in adults with osteoarthritis of the knee?

Bottom Line

This well-done study found that regular three-month intra-articular injections of triamcinolone for two years resulted in no significant difference in pain and function assessments compared with saline. However, a significant increase in cartilage loss and damage did occur in patients receiving corticosteroids compared with saline. This study confirms the findings of the only other published study with a low risk of bias (see Synopsis). (Level of Evidence = 1b)

Synopsis

Although intra-articular corticosteroids are commonly used for the treatment of knee osteoarthritis, data are limited in terms of benefits and safety. The most recent Cochrane review on this topic evaluated 27 randomized controlled trials (26 with a high risk of bias) and found minimal improvement in pain and function in the short-term with corticosteroids compared with placebo. The only study with low risk of bias found no benefit from corticosteroids (Jüni P, et al. *Cochrane Database Syst Rev.* 2015;(10):CD005328). These investigators recruited 140 adults, 45 years or older, with knee osteoarthritis diagnosed using standard national criteria. Eligible patients randomly received (concealed allocation assignment) either ultrasound-guided intra-articular triamcinolone (40 mg) or saline injections every three months for two years. Patients, clinicians administering the injections, and outcome assessors remained masked to treatment group assignment. Pain and function assessments based on validated questionnaires and physical examination occurred regularly throughout the study. Periodic magnetic resonance imaging occurred at 0, 12, and 24 months to evaluate changes in knee cartilage volume over the two-year period. Complete follow-up occurred for 95% of patients at two years.

Using intention-to-treat analysis, pain and function scores did not significantly differ between the two groups. However, the rate of cartilage loss and damage was significantly greater in the triamcinolone treatment group. There were no significant group differences in serious adverse events.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (any)

Reference: *McAlindon TE, LaValley MP, Harvey WF, et al. Effect of intra-articular triamcinolone vs saline on knee cartilage volume and pain in patients with knee osteoarthritis: a randomized clinical trial.* JAMA. *2017;317(19):1967-1975.*

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