A Randomized Trial of Clindamycin Versus Trimethoprim-sulfamethoxazole for Uncomplicated Wound Infection

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Abstract

Background. With the emergence of community-associated methicillin-resistant *Staphylococcus aureus* (MRSA) in the United States, visits for skin infections greatly increased. Staphylococci and streptococci are considered predominant causes of wound infections. Clindamycin and trimethoprim-sulfamethoxazole (TMP-SMX) are commonly prescribed, but the efficacy of TMP-SMX has been questioned.

Methods. We conducted a randomized, double-blind, superiority trial at 5 US emergency departments. Patients >12 years of age with an uncomplicated wound infection received oral clindamycin 300 mg 4 times daily or TMP-SMX 320 mg/1600 mg twice daily, each for 7 days. We compared the primary outcome, wound infection cure at 7–14 days, and secondary outcomes through 6–8 weeks after treatment, in the per-protocol population.

Results. Subjects had a median age of 40 years (range, 14–76 years); 40.1% of wound specimens grew MRSA, 25.7% methicillin-susceptible *S. aureus*, and 5.0% streptococci. The wound infection was cured at 7–14 days in 187 of 203 (92.1%) clindamycin-treated and 182 of 198 (91.9%) TMP-SMX–treated subjects (difference, 0.2%; 95% confidence interval [CI], −5.8% to 6.2%; *P* = not significant). The clindamycin group had a significantly lower rate of recurrence at 7–14 days (1.5% vs 6.6%; difference, −5.1%; 95% CI, −9.4% to −.8%) and through 6–8 weeks following treatment (2.0% vs 7.1%; difference, −5.1%; 95% CI, −9.7% to −.6%). Other secondary outcomes were statistically similar between groups but tended to favor clindamycin. Adverse event rates were similar.

Conclusions. In settings where MRSA is prevalent, clindamycin and TMP-SMX produce similar cure and adverse event rates among patients with an uncomplicated wound infection. Further study evaluating differential effects of antibiotics on recurrent infection may be warranted.

Clinical Trials Registration. NCT00729937.