

A 10-day regimen of levofloxacin was not needed in patients with uncomplicated cellulitis who had an acceptable 5-day response

Hepburn MJ, Dooley DP, Skidmore PJ, et al. Comparison of short-course (5 days) and standard (10 days) treatment for uncomplicated cellulitis. Arch Intern Med. 2004;164:1669-74.

QUESTION

In patients with uncomplicated cellulitis after 5 days of levofloxacin, is a 10-day course needed?

METHODS

Design: Randomized placebo-controlled trial.

Allocation: Concealed.*

Blinding: Blinded (clinicians, patients, data collectors, and outcome assessors).*

Follow-up period: 10 days of treatment followed by an 18-day observational period.

Setting: A tertiary care military hospital in San Antonio, Texas, USA.

Patients: 87 patients \geq 18 years of age (mean age 53 y, 51% women) who had cellulitis involving the face, trunk, or an extremity and presented to the investigators for evaluation \leq 24 hours after initiation of antibiotic therapy. Exclusion criteria included bacteremia, severe sepsis, clinical evidence of deep soft-tissue infection (abscess, fasciitis, myositis, osteomyelitis, or septic arthritis), infection requiring debridement at the site, animal or human bite wound, neutropenia, diabetic foot infection with nonviable tissue, and chronic cellulitis.

Intervention: 121 patients received antibiotics for the first 5 days of treatment, with a switch from the initial drug (usually a β -lactam) to levofloxacin (500 mg/d) within 24 hours after presentation. At day 5, patients who were still eligible ($n = 87$) were randomized to an additional 5 days of levofloxacin (at the initial dose) ($n = 44$) or placebo ($n = 43$).

Outcomes: Resolution of infection at day 14, defined as disappearance of warmth and tenderness at the site of infection with substantial improvement in erythema and edema without symptom recurrence by day 28. The study had 80% power to detect a 20% difference in resolution rates between groups.

Patient follow-up: All randomized patients were included in the intention-to-treat analyses.

MAIN RESULTS

The groups did not differ for number of patients who had resolution of their infections by 14 days without relapse by 28 days (Table).

CONCLUSION

In patients with uncomplicated cellulitis, a 5-day course of antibiotics was as effective as a 10-day course for resolving the infection.

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*See Glossary.

5 vs 10 days of antibiotic therapy in uncomplicated cellulitis at 28 days†

Outcome	5-day regimen	10-day regimen	Difference (95% CI)
Resolution of infection at 14 d without relapse at 28 d	98%	98%	0% (-10 to 10)

†Resolution of infection = disappearance of warmth and tenderness at the site of infection with substantial improvement in erythema and edema. Difference and CI (defined in Glossary) calculated from data in article.

COMMENTARY

The study by Hepburn and colleagues, which compared a 5-day with a 10-day antimicrobial regimen for uncomplicated cellulitis, concluded that 5 days of levofloxacin was as good as 10 days for resolution of infection. However, 2 important features of this study need to be kept in mind.

First, patients were not randomized to a 5-day or 10-day regimen up front. Rather, those who were randomized had already had 5 days of treatment followed by a second evaluation. Good reasons existed for taking this approach: Roughly 25% of the initial cohort were ineligible for randomization because of treatment failure, treatment intolerance, or an alternate diagnosis. Sending patients initially diagnosed with uncomplicated cellulitis with either a 5-day script or a 10-day script without interim follow-up would be expected to result in a 75% success rate at best. Also, because approximately 10% of patients with cellulitis have an initial worsening of erythema with antibiotics and many others take more than 2 days before appreciable regression of erythema is observed (1), evaluating patients before 5 days may have rendered more patients ineligible for randomization.

Second, the study looked at a relatively broad-spectrum antibiotic for an infection that is decidedly narrow-spectrum and paucibacillary. Although few reasons exist to suspect that a short course of a narrow-spectrum oral antibiotic (e.g., cloxacillin or cephalexin) would result in different outcomes in mild cellulitis, the evidence is lacking. In fact, the few and mostly small randomized controlled trials that exist show no superiority of one regimen over another in cellulitis (2).

Based on these data, it is reasonable to recommend that patients who have been successfully treated with 5 days of empiric oral antimicrobial therapy be taken off antibiotics.

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References

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2. Morris A. Cellulitis and erysipelas. Clin Evid. 2003;(10):1878-83.