

Compression Therapy to Prevent Recurrent Cellulitis of the Leg

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Abstract

BACKGROUND Chronic edema of the leg is a risk factor for cellulitis. Daily use of compression garments on the leg has been recommended to prevent the recurrence of cellulitis, but there is limited evidence from trials regarding its effectiveness.

METHODS In this single-center, randomized, nonblinded trial, we assigned participants with chronic edema of the leg and recurrent cellulitis, in a 1:1 ratio, to receive leg compression therapy plus education on cellulitis prevention (compression group) or education alone (control group). Follow-up occurred every 6 months for up to 3 years or until 45 episodes of cellulitis had occurred in the trial. The primary outcome was the recurrence of cellulitis. Participants in the control group who had an episode of cellulitis crossed over to the compression group. Secondary outcomes included cellulitis-related hospital admission and quality-of-life assessments.

RESULTS A total of 183 patients were screened, and 84 were enrolled; 41 participants were assigned to the compression group, and 43 to the control group. At the time of a planned interim analysis, when 23 episodes of cellulitis had occurred, 6 participants (15%) in the compression group and 17 (40%) in the control group had had an episode of cellulitis (hazard ratio, 0.23; 95% confidence interval [CI], 0.09 to 0.59; $P=0.002$; relative risk [post hoc analysis], 0.37; 95% CI, 0.16 to 0.84; $P=0.02$), and the trial was stopped for efficacy. A total of 3 participants (7%) in the compression group and 6 (14%) in the control group were hospitalized for cellulitis (hazard ratio, 0.38; 95% CI, 0.09 to 1.59). Most quality-of-life outcomes did not differ between the two groups. No adverse events occurred during the trial.

CONCLUSIONS In this small, single-center, nonblinded trial involving patients with chronic edema of the leg and cellulitis, compression therapy resulted in a lower incidence of recurrence of cellulitis than conservative treatment