



Q/ What is the best initial treatment for venous stasis ulcers?

EVIDENCE-BASED EVIDENCE-BASED ANSWER

A/ THE MAINSTAY OF INITIAL TREATMENT of venous stasis ulcers is compression therapy (strength of recommendation [SOR]: **A**, systematic review of randomized controlled trials [RCTs]). Multicomponent compression therapy is slightly superior to single-component therapy (SOR: **B**, systematic review of RCTs with inconsistent results).

The various types of dressings available for managing venous stasis ulcers are similarly efficacious (SOR: **A**, systematic

review of RCTs).

Systemic therapies such as aspirin (SOR: **B**, single RCT) and pentoxifylline (SOR: **A**, systematic review of RCTs) improve healing rates whereas antibiotics don't (SOR: **A**, systematic review of RCTs).

Cadexomer iodine, a topical antiseptic, improves ulcer healing but may not be feasible in most clinical settings because of the frequent dressing changes required (SOR: **B**, single RCT).

Evidence summary

A systematic review found 7 RCTs with a total of 686 subjects that compared compression with no compression for venous leg ulcers.¹ Although the outcome data were too heterogeneous for a meta-analysis, the 4 studies in which statistical analysis was possible showed that compression healed venous leg ulcers faster than no compression (relative risk [RR] range=1.2 to 4 in favor of compression), as detailed in the **TABLE**. Notably, only 2 of the studies achieved statistical significance ($P<.05$).

Two other studies in this review, with 20 and 245 patients, compared 4-component with single-component compression. In the smaller study, multicomponent compression produced more completely healed ulcers at 12 weeks, but the difference wasn't statistically significant.

In the larger study, nonhealing at 24 weeks was much less common among patients treated with multicomponent compression than single-component therapy (RR=0.74; 95% confidence interval [CI], 0.59-

0.92; number needed to treat [NNT]=5.7; $P=.009$), and median time to healing was shorter (78 vs 168 days; statistical significance not reported).

The reviewers concluded that compression increases ulcer healing rates compared with no compression and that multicomponent systems are more effective than single-component systems.¹

Similar results, different costs among dressing types

A systematic review and meta-analysis of 42 RCTs that included 3001 patients compared multiple dressing types, including hydrocolloid, foam, alginate, and low-adherent dressings, used beneath compression.² The study found no significant differences in healing rates among the dressings, although costs varied widely.

Systemic therapy:

Aspirin and pentoxifylline help

Systemic or topical treatments are an alter-

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TABLE

How compression compares with no compression for healing venous stasis ulcers¹

Subjects (N)	Follow-up (mo)	% Healed without compression	% Healed with compression	RR favoring compression (95% CI)	NNT
87	6	33.3	50	1.5 (0.9-2.5)*	6
36	12	41.2	94.7	2.3 (1.3-4.1)	2
36	3	16.7	66.7	4 (1.4-11.8)	2
233	12	54.9	65	1.2 (0.96-4.5)*	10

CI, confidence interval; NNT, number needed to treat; RR, relative risk.

*Results not statistically significant.

native for patients with contraindications or intolerance to compression. An RCT of 20 patients that compared aspirin 300 mg/day with placebo found higher ulcer healing rates in the aspirin group after 4 months (38% vs 0%; NNT=2.6; *P*<.007). Improvement, defined as reduction in ulcer size, occurred in 52% of patients treated with aspirin but only 26% treated with placebo (NNT=3.8; *P*<.007).³

A systematic review of 11 trials (N=841) found that pentoxifylline accelerated healing rates vs placebo (NNT=4; 95% CI, 3-6); the authors recommended its use in conjunction with compression therapy when possible.⁴

Another systematic review of 5 RCTs (N=232) found that systemic antibiotics didn't improve outcomes significantly more than placebo.⁵

Topical cadexomer iodine: Effective, but is it feasible?

One of the 5 reviewed RCTs (60 patients) found that topical cadexomer iodine pro-

duced more frequent healing than standard care at 6 weeks (NNT=3; 95% CI, 2-19).⁵ However, the cadexomer regimen involved daily dressing changes, which might limit feasibility in many clinical settings.

Other interventions to consider for venous ulcers include hyperbaric oxygen and venous surgery.

Recommendations

The Association for the Advancement of Wound Care recommends compression therapy and limb elevation to reduce edema. They also recommend cleaning the ulcer with a safe cleanser, debriding nonvital tissue, maintaining a moist wound environment, and managing pain and odor.⁶

The Wound, Ostomy, and Continence Nurses Society and the American Society of Plastic Surgeons make similar recommendations: ulcer debridement, edema management, infection control, and pain management.^{7,8} **JFP**

Systemic aspirin and pentoxifylline improve healing rates, but systemic antibiotics don't.

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