Addition of surgical correction to compression therapy reduced recurrences in chronic venous leg ulceration


**Clinical impact ratings:** GIM/FP/GP ★★★★★✩ Hematol/Thrombo ★★★★★✩

**Question**
In patients with chronic venous leg ulcers, is surgical correction plus compression better than compression alone for increasing ulcer healing and reducing recurrence?

**Methods**
**Design:** Randomized controlled trial (ESCHAR [Effect of Surgery and Compression on Healing And Recurrence]).
**Allocation:** Unclear.*
**Blinding:** Unblinded.*
**Follow-up period:** 3 years for ulcer healing; 4 years for ulcer recurrence.
**Setting:** Specialist nurse-led leg ulcer clinics in 3 vascular centers in southwestern England, United Kingdom.
**Patients:** 500 patients (mean age 73 y, 58% women) with an open (n = 341) or recently (≤ 6 mo) healed (n = 159) ulceration between knee and malleoli of > 4 weeks’ duration; an ankle–brachial pressure index ≥ 0.85; and superficial deep venous reflux on duplex scanning. Exclusion criteria were inability to perform duplex scanning or to have compression or surgical therapy, deep venous occlusion, and malignant ulceration.
**Intervention:** Surgery plus compression therapy (n = 242) or compression therapy alone (n = 258). Patients with reflux at the saphenofemoral junction or long saphenous vein had saphenofemoral junction disconnection, stripping of the long saphenous vein to below the knee, and calf varicosity avulsions. Patients with reflux in the short saphenous vein had saphenopopliteal junction disconnection and calf varicosity avulsions.

**Conclusion**
In patients with chronic venous ulceration, adding surgery to compression therapy did not increase ulcer healing but did reduce recurrence.

**References**


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**Surgery plus compression vs compression therapy alone for chronic venous leg ulceration†**

<table>
<thead>
<tr>
<th>Outcome at 4 years</th>
<th>Surgery + compression</th>
<th>Compression</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulcer recurrence</td>
<td>31%</td>
<td>56%</td>
<td>62% (35 to 73)</td>
<td>3 (3 to 5)</td>
</tr>
</tbody>
</table>

†Abbreviations defined in Glossary. RRR, NNT, and CI calculated from data in article.

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**Commentary**

The increasing frequency and financial burden associated with venous leg ulcers negatively affect quality of life (1-3). Additionally, once a person develops a venous leg ulcer, the likelihood of recurrence is estimated to be as high as 7 in 10 (3, 4). The mainstay of treatment has been compression therapy, with multilayer wraps supplanting single-layer dressings as the method of choice. After healing, compression stockings are the most common choice, but adherence to a regimen of compression hosiery is often poor. This is probably because elderly patients with limited joint mobility have difficulty donning the tight garments (5). Recent studies suggested that surgical intervention addressing the superficial venous system (stripping and varicosity avulsion) might be a promising way forward in addressing the cause of the problem and thereby reducing recurrence (6); Gohel and colleagues provide further evidence to support this contention.

Although the groups did not differ substantially for healing rates in this trial, the compression-alone group had twice the number of recurrences, and the compression-plus-surgery group had a slightly less impressive (but still substantial) increase in the number of ulcer-free days at up to 3 years after healing.

The authors point out, and rightly so, that this study has real-life confounders, such as failure to turn up for procedures and likely problems with adherence to preventive care regimens (the latter issue was not measured as well as one might expect). Nonetheless, the intention-to-treat analysis, relatively long follow-up, and large sample size make this a compelling case for a combined approach to successfully healing these wounds and keeping them healed.

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