Below knee elastic compression stockings reduced development of the post-thrombotic syndrome in proximal deep venous thrombosis


Clinical impact ratings GP/FP/Primary care ★★★★★★ IM/Ambulatory care ★★★★★★ Internal medicine ★★★★★★

Q In patients with a first episode of acute symptomatic proximal deep venous thrombosis (DVT), do below knee elastic compression stockings prevent the post-thrombotic syndrome (PTS)?

METHODS

**Design:** randomised controlled trial.

**Allocation:** (concealed)†.

**Blinding:** blinded (data collectors, outcome assessors, and monitoring committee)†.

**Follow up period:** mean 49 months (range 6–60 mo).

**Setting:** university hospital in Padua, Italy.

**Patients:** 180 patients (mean age 62 y, 57% women) with a first episode of acute symptomatic proximal DVT (confirmed by ultrasonography) who were receiving conventional anticoagulant treatment. Exclusion criteria were recurrent ipsilateral DVT, pre-existing leg ulcers or signs of chronic venous insufficiency, bilateral thrombosis, a short life expectancy, or contraindication for use of stockings.

**Interventions:** daily wearing of below knee, graded, elastic compression stockings on the affected leg (30–40 mm Hg of pressure at the ankle) for 2 years (n = 90) or not wearing elastic compression stockings (n = 90).

**Outcomes:** PTS on the side of the index DVT. PTS was defined by assessing the presence and severity of 5 leg symptoms and 6 objective signs. For each symptom or sign, a score of 0–3 was assigned using the contralateral unaffected leg as the denominator. A score ≥15 on ≥2 consecutive visits assessed ≥3 months apart was defined as severe PTS. A score of 5–14 on 2 consecutive visits assessed ≥3 months apart was defined as mild PTS. A lower limb venous ulcer was consistently classified as severe PTS.

**Patient follow up:** 100% (intention to treat analysis).

*See glossary.
†Information provided by author.

MAIN RESULTS

Patients in the stocking group had a lower rate of PTS than did those in the no stocking group (table).

CONCLUSION

In patients with a first episode of acute symptomatic proximal deep venous thrombosis, below knee elastic compression stockings reduced the development of the post-thrombotic syndrome.

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For correspondence: Dr P Prandoni, University Hospital of Padua, Padua, Italy. paoloprandoni@tin.it

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Elastic compression stockings vs no elastic compression stockings to prevent the post-thrombotic syndrome at mean 49 months in acute symptomatic proximal deep venous thrombosis (DVT)*

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Elastic stockings</th>
<th>No elastic stockings</th>
<th>Adjusted hazard ratio (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS</td>
<td>26%</td>
<td>49%</td>
<td>0.49 (0.29 to 0.84)</td>
<td>5 (3 to 11)</td>
</tr>
</tbody>
</table>

*CI and NNT defined in glossary.
†Hazard ratio adjusted for age, sex, clinical presentation of DVT, thrombophilic status, extent of the index thrombotic episode, and use of unfractionated or low molecular weight heparin for initial treatment of thrombosis.