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EVIDENCE BASED COMPRESSION RECOMMENDATIONS FOR LYMPHEDEMA

DISCLOSURES

None

Uncontrolled (pre-post) studies

Compression bandaging reduces volume more and faster when compared to wearing a compression sleeve.

IPC seems beneficial in helping to reduce the edema volume in the acute phase of treatment. Compression sleeves do not aid in the volume reduction in the acute phase but they do prevent additional swelling.

Scientists have conducted a great deal of research into the treatment of SE. However, the literature contains no evidence to suggest the most effective treatment. Harms from treatment are minor and likely to have little clinical impact.
The Canadian Agency for Drugs and Technologies in Health (CADTH)

Intermittent Pneumatic Compression Devices for the Management of Lymphedema: A Review of Clinical Effectiveness and Guidelines

Key Findings

The evidence suggested that intermittent pneumatic compression (IPC) may not provide additional benefits when used in combination with routine management of lymphedema. No literature for the comparative clinical effectiveness between single chamber and multi-chamber IPC devices was identified. A 2014 evidence-based guideline recommended the short-term use of IPC in combination with a lymphedema treatment program for reducing breast cancer-related lymphedema.

Goals of compression in lymphedema

- Edema reduction
- reduction of fluid filtration at the capillaries
- enhancement of lymphatic drainage
- Volume containment

Factors affecting compression in lymphedema

- Edema reduction
  - reduction of fluid filtration at the capillaries
  - enhancement of lymphatic drainage
- Volume containment

Table 2. Quality assessment of included studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Randomization</th>
<th>Allocation concealment</th>
<th>Blinding</th>
<th>Loss of follow-up and dropout</th>
<th>Quality profile</th>
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</table>

ITC: intention to treat

Acoustic radiation force impulse (ARFI) imaging

The mean shear wave velocity before IPC was 2.44 m/s and after 30 min IPC it was 1.87 m/s.
Lower pressure decreases tissue stiffness

Key points

- Available evidence is fragmented and moderate-to-low quality
- Existing evidence suggest that compression is effective:
  - Volume reduction in acute phase
  - Volume containment in chronic use
- Evidence is insufficient to select the best compression device for a specific patient

Key points

- Practical solutions:
  - Patient comfort and QOL – compression is better than no compression
  - Trial and error
- Future studies:
  - Dose
  - Goal-specific compression (reduction vs. containment)
  - Patient-specific compression (tissue stiffness)