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Health Care Benefits One Year After Invasive Treatment for Lower Extremity Ischemia: The Patient’s Baseline Status is Key
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Disclosures
• None

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One Year Health Status Benefits Following Treatment for New Onset or Exacerbation of Peripheral Arterial Disease Symptoms: The Importance of Patients’ Baseline Health Status

Health Status

Prognosis
Co-morbidity
Invasive treatment

Invasive Treatment

QoL

Response to non-invasive options
Analgesic medication

Smolderen et al. 2009 in JVS

Smolderen et al. 2009 in Circulation
Invasive Treatment

- Ambiguous decision-making process for invasive treatment referral in lower-extremity peripheral arterial disease (PAD):
  - No appropriateness criteria
  - Studies mainly focused on patency rates
  - Limited information on health status gains

Study Purpose

1. Compare 1 year Health Status after invasive vs. non-invasive treatment
2. To evaluate if pre-procedural Health Status is related to change in Health Status 1 year after Diagnosis

Hypothesis: Patients with a lower Health Status have more to gain

Methods

Inclusion
- Newly onset of PAD symptoms
- Two Dutch Teaching Hospitals
  - Mrt '06 – Nov '10
- Abnormal Ankle-Brachial index (ABI)
  - < 0.90 in rest, or 15% decrease after Treadmill test

Exclusion
- Non compressive ABI (>1.30)
- Ischaemia
- Severe comorbidity
- Unability to understand the Dutch Language
- Duplex-scanning >3 Months at the moment of inclusion
- Intervention prior to inclusion

Methods

- Short Form 12 (SF-12): Physical Component Score = PCS
  - Baseline
  - 1-year
- Documentation of
  - Clinical information / Risk factors
  - Treatment information

Statistical Analysis

- Quartiles of baseline Health Status Scores:
  - Mean scores comparison for invasive vs. non-invasive treatment
  - NNT for clinically relevant changes (0.5–1SD = >5->10 points SF-12, PCS)

<table>
<thead>
<tr>
<th>Statistical Analysis (n=474)</th>
<th>Invasive Treatment</th>
<th>Non-invasive Treatment</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (SD, years)</td>
<td>62 (9.6)</td>
<td>66 (9.1)</td>
<td>.006</td>
</tr>
<tr>
<td>Male sex (%)</td>
<td>66</td>
<td>68</td>
<td>.83</td>
</tr>
<tr>
<td>Myocardial infarction in MH (%)</td>
<td>16</td>
<td>19</td>
<td>.39</td>
</tr>
<tr>
<td>COPD (%)</td>
<td>52</td>
<td>53</td>
<td>.77</td>
</tr>
<tr>
<td>Hypertension (%)</td>
<td>39</td>
<td>32</td>
<td>.61</td>
</tr>
<tr>
<td>Hypertension (%)</td>
<td>94</td>
<td>99</td>
<td>.33</td>
</tr>
<tr>
<td>Body mass index (mean, kg/m²)</td>
<td>26</td>
<td>27</td>
<td>.10</td>
</tr>
<tr>
<td>COPD (%)</td>
<td>12</td>
<td>17</td>
<td>.20</td>
</tr>
<tr>
<td>Renal dysfunction (%)</td>
<td>19</td>
<td>9</td>
<td>.62</td>
</tr>
<tr>
<td>Back Pain (%)</td>
<td>21</td>
<td>12</td>
<td>.53</td>
</tr>
<tr>
<td>Mean ABI change (%)</td>
<td>63</td>
<td>57</td>
<td>.26</td>
</tr>
<tr>
<td>Pain-free walking distance (median, m)</td>
<td>75</td>
<td>85</td>
<td>.26</td>
</tr>
<tr>
<td>Baseline walking distance (median, m)</td>
<td>240</td>
<td>220</td>
<td>.33</td>
</tr>
</tbody>
</table>
Δ1-year PCS scores by treatment

Conclusion

- Patients with lower pre-procedural PCS scores had more to gain; those with higher baseline scores did not significantly improve
- NNT was higher for patients that had a better health status when compared to patients with a lower health status

Conclusion

- Invasive treatment associated with Δ1-year health status
- Future research focus on health status threshold and invasive treatment referral