New and current data on all cause and cardiovascular mortality in patients with IC and CLTI: Have recent improvements in medical treatment and statins made a difference

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Background

1998-2010

Objective

To evaluate absolute mortality risks and whether changes in mortality risks occurred in men and women with intermittent claudication (IC) or chronic limb threatening ischaemia (CLTI) in the Netherlands between 1998 – 2010

Methods

Dutch nationwide registers:
- Hospital discharge register
- Population register
- Cause of Death Register

Total cohort IC en CLI :
- Period A: 1998-2004
- Period B: 2005-2010

# 1 year- and 5 year cardiovascular (CV) and all cause mortality rates

# Representative sample of the general Dutch population n=28,494

# Exclusion of 30 day mortality
Results – Cohort: n = 47.548

<table>
<thead>
<tr>
<th>Baseline</th>
<th>IC</th>
<th>CLTI</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>34.078</td>
<td>13.470</td>
<td>28.494</td>
</tr>
<tr>
<td>Male</td>
<td>63%</td>
<td>56%</td>
<td>39%</td>
</tr>
<tr>
<td>Age</td>
<td>67.6±10.4</td>
<td>71.4±12.1</td>
<td>72.1±16.8</td>
</tr>
<tr>
<td>Hospital</td>
<td>63%</td>
<td>93%</td>
<td>-</td>
</tr>
</tbody>
</table>

Results – Mortality risk in patients with IC

Change in 1- and 5-years mortality risk in Period B versus Period A, stratified for sex

In men, 1 y CV mortality was significantly lower in period B (4%) compared with period A (5%) (adj HR 0.68; 95% CI 0.59-0.79; p<0.001). In men, age-adjusted 5 year CV mortality risk significantly decreased in period B (14%) compared with period A (16%) HR 0.76 95% 0.69-0.83 p<0.001.

In women, no significant change in 1 and 5-year CV mortality was observed.

Results – Mortality risk in patients with CLTI

In men, no difference in 1- and 5-year CV mortality (11% and 30% respectively).

In women, significant decline in both 1-year and 5-year CV mortality.
1yr mortality decreased 13% to 12% (adj HR 0.81; 95%CI 0.69-0.95; p<0.01), and 5 year decreased 31% to 29% (adj HR 0.84; 95%CI 0.74-0.94; p=0.01).

In both male and female patients, 1-year and 5-year all-cause mortality significantly declined in period B compared with period A.

Results – IC vs GDP

IC patients vs GDP:
A: HR 2.04 (2.00-2.08)
B: HR 1.78 (1.73-1.84 P<0.001)

Patients with IC or CLTI of both sexes had a 2- to 5-fold increase in 1 and 5 year CV and ALL cause mortality, as compared to the general population.

Results - CLTI vs GDP

CLI patients vs GDP:
- Period A: HR 3.24 (3.20-3.29)
- Period B: HR 2.91 (2.86-2.97 P<0.001)

1-year mortality risks were higher in men (HR 5.19 95% CI 4.30-6.26) than in women (HR 3.74 95% CI 3.19 – 4.38).

5-year risks remained significantly higher in men.

Limitations

- Retrospective
- ICD-coding
- Validation coding
Conclusions

• The risk of premature mortality for both patients with intermittent claudication and CLTI significantly declined in the Netherlands, in a sex-specific manner over the period 1998-2010.

• Absolute risk of cardiovascular death and all-cause mortality remains high in patients with IC en CLTI as compared to GDP.