Long-term Outcomes of Deep Vein Thrombosis (DVT)

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Background:

- DVT is a common disease, 1 in 1,000 per year in the general UK population

- 25,000 deaths/year in the UK from VTE

- Scarce data on long-term outcomes of DVT
Aim:

- To determine the long-term (five-year) outcomes of patients with DVT
Methods:

Study Population:

n= 910

Attended the ambulatory care service at the Royal Infirmary of Edinburgh for investigation of potential DVT from January – December 2008

n= 574 excluded:

- n= 113 Incomplete data recorded
- n= 461 Raised D-dimer but negative Doppler scan

n= 336; of which:

n= 152 had positive D-dimer & positive Doppler scan (i.e. DVT group)

n= 184 had negative D-dimer (i.e. No DVT group)
Follow-up:

- Via clinical notes + the integrated electronic patient records system

- Followed up to five years
Adverse Outcomes Measured:

- All-cause mortality
- Recurrent VTE (DVT or PE)
- New diagnosis of cancer
- Cardiovascular events (ACS + stroke)
## Demographics:

<table>
<thead>
<tr>
<th></th>
<th>DVT</th>
<th>No DVT</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>59 (19)</td>
<td>50 (16)</td>
<td>p= 0.002</td>
</tr>
<tr>
<td>Gender</td>
<td>57% M; 43% F</td>
<td>38% M; 62% F</td>
<td>p&lt; 000.1</td>
</tr>
</tbody>
</table>
Figure 1: Majority of confirmed DVT were of proximal location
Results:

Five-year outcomes of DVT vs no-DVT

<table>
<thead>
<tr>
<th>Outcome</th>
<th>DVT</th>
<th>No DVT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse outcomes**</td>
<td>51%</td>
<td>19%</td>
</tr>
<tr>
<td>Crude mortality**</td>
<td>24%</td>
<td>6%</td>
</tr>
<tr>
<td>New VTE**</td>
<td>23%</td>
<td>7%</td>
</tr>
<tr>
<td>New cancer</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>CVS events</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

NB: ** = p<0.0001
## Five-year Outcomes:

<table>
<thead>
<tr>
<th></th>
<th>DVT</th>
<th>D-dimer Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Outcomes</td>
<td>51.0%</td>
<td>15.7%</td>
</tr>
<tr>
<td>All-cause Mortality</td>
<td>23.8%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Recurrent VTE</td>
<td>22.5%</td>
<td>2.9%</td>
</tr>
<tr>
<td>New Cancer</td>
<td>5.3%</td>
<td>8.1%</td>
</tr>
<tr>
<td>CVS Event</td>
<td>4.6%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>
Results:

Five-year survival of DVT vs top four cancers in Scotland

*Cancer survival figures quoted from ISD (National Registry) Scotland. Available online at: <http://www.isdscotland.org>
Results:

Influence of DVT location on long-term outcomes

- New VTE: 16% (Distal DVT), 27% (Proximal DVT)
- Crude mortality: 16% (Distal DVT), 29% (Proximal DVT)
- Adverse outcomes: 35% (Distal DVT), 60% (Proximal DVT)

NB: ** = p<0.0001
Results:

Five-year mortality of DVT vs no DVT adjusting for age

NB: ** = p<0.0001
Conclusion:

- DVT is associated with significant adverse long-term outcomes
- Mortality comparable to some common cancers
- Further research to detect the subset of patients who would benefit from targeted follow-up is urgently required
Thank you