The PREPIC Trial- Fact or Fiction?

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The PREPIC Trial - Study Design

- First prospective, randomized trial comparing anticoagulation to IVC filters
- From 9/91-2/95 in 44 French centers
- 400 patients with DVT “at risk” for PE
- Randomized to
  - UH or LWMH
  - IVC filter or no IVC filter
    - Greenfield, Cardial, LGM, or Bird’s nest filter
- All patients placed on oral anticoagulation at discharge when possible

PREPIC – Study Design

- Primary outcome
  - Pulmonary Embolism
- Secondary outcomes
  - Deep venous thrombosis
  - Death
  - Major filter complications
  - Major bleeding
- Data published at 2 (NEJM 1998) and 8 years (Circulation 2005)

No Disclosures
PREPIC - Critical Appraisal

- Now thought of as a study of filter randomization in patients with DVT but actually included randomized treatment to unfractionated and LMW heparins
  - Weak study design

PREPIC - Design

- Do patients with acute PE and high risk of recurrence benefit from an IVC filter in addition to anticoagulation alone?
  - Multicenter, randomized, controlled trial, 2006-2012, Intention-to-treat analysis
  - 399 patients- 200 IVC filter, 199 no filter, all anticoagulated
  - Risk factors: age>75, CHF, COPD, cancer, RV dysfunction, MI, stroke, bilateral DVT, iliocaval thrombus
  - All filters retrieved at 3 months
  - Follow up at 3 and 6 months
PREPIC 2 - Results

<table>
<thead>
<tr>
<th>PT Test</th>
<th>Control (n=20)</th>
<th>PREPIC (n=20)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR</td>
<td>1.00 (IQR 0.90-1.05)</td>
<td>1.03 (IQR 0.96-1.10)</td>
<td>0.17</td>
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<tr>
<td>APTT</td>
<td>30.0 (IQR 25.0-35.0)</td>
<td>30.5 (IQR 27.0-33.0)</td>
<td>0.05</td>
</tr>
</tbody>
</table>

No other data to suggest that removal of IVC filters lowers the risk of DVT long-term.

PREPIC 2 suggests that IVC filter may not decrease the risk of PE in high risk patients and did not show an associated between filters and recurrent DVT.

PREPIC - Fact or Fiction

- Interesting study with controversial findings
- The data from PREPIC suggest that patients with IVC filters have:
  - Increased risk of DVT long-term
  - Decrease risk of PE long-term
- No other data to suggest that removal of IVC filters lowers the risk of DVT long-term
- PREPIC 2 suggests that IVC filter may not decrease the risk of PE in high risk patients and did not show an associated between filters and recurrent DVT