PE and DVT. Does this Patient Need an IVC Filter?

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Disclosures

- Scientific advisory board – Novate Medical
- Non-compensated consultant – BTG

Case

- 50 year old man presents from OSH with LLE swelling and shortness of breath
- His LLE looks like this:
- Pulses, motor function and sensation are normal
- Symptoms started 3 days ago and “are about the same” despite anticoagulation
- He says: “In the other hospital they would not do anything. I want a procedure to get the clot out”

Case Cont’d – He is found to have:

Echocardiogram / Labs @Presentation

- TroT <0.01, NT-proBNP – 11,702 pg/ml (normal range 0-900)

Case Cont’d – The Patient is Started on Anticoagulation with LMWH

Is an IVC filter indicated?
Risk of “Second Hit” While Anticoagulated VERY LOW (RIETE Data of ~16,200 Patients)


Case – Cont’d

• A decision is made for emergent catheter directed thrombolysis of the DVT.

Is an IVC filter indicated?

How Common are PE in DVT Procedures?

• ATTRACT –
  • IVCF use not mentioned
  • Peri-procedural PE not specifically reported
  • 1 PE reported at 6 months
• CAVENT –
  • No details about IVCF use
  • There were no Pulmonary embolism

In 2018, IVCF in CDT Declining. Associated with Increased Price


Case Cont’d – The Patient’s Condition Deteriorates in the MICU

• HR rises to 120 bpm
• Blood Pressure is 80/50 mmHg
• Hct is stable

Is an IVC filter indicated Now?

IVC Filters Associated with Reduced Mortality in Unstable Patients (in Database Studies)

Stein PD. and Matta F. AJM. 2012; 125: 465-470

P<0.0001
Population Data: IVCF Reduced Mortality in Unstable PE Patients with or without Lytics


Per Non-Randomized Data, IVCF Benefit Massive PE Patients

Table 4: In-hospital All-cause Mortality according to Age and Use of Filters

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>Mortality No IVCF (%)</th>
<th>Mortality IVCF (%)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-30</td>
<td>1/36 (2.8)</td>
<td>1/34 (2.9)</td>
<td>.65</td>
</tr>
<tr>
<td>31-40</td>
<td>3/145 (2.1)</td>
<td>2/144 (1.4)</td>
<td>.22</td>
</tr>
<tr>
<td>41-50</td>
<td>16/442 (3.6)</td>
<td>16/439 (3.6)</td>
<td>.86</td>
</tr>
<tr>
<td>51-60</td>
<td>20/454 (4.4)</td>
<td>19/451 (4.2)</td>
<td>.58</td>
</tr>
<tr>
<td>61-70</td>
<td>30/468 (6.4)</td>
<td>16/426 (3.7)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>&gt; 70</td>
<td>18/378 (4.8)</td>
<td>8/333 (2.4)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

IVCF = inferior vena cava filter.