Structural injury of adjacent organs due to inferior vena cava filter penetration

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Disclosure

Speaker name:
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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest
Introduction

DEFECTIVE IVC FILTERS

Seek Justice for Dangerous Medical Devices
Introduction

Long-term risks of IVC filters include the following:

- Deep vein thrombosis (DVT)
- Cardiac tamponade
- Hemorrhagic pericardial effusion
- Air embolisms
- Infections
- Filter clogged by blood clots

August 2010: FDA Issues Safety Communication

Unfortunately, IVC filters do not always work as promised—and they can often cause severe side effects. In 2010, the FDA released a Safety Communication. In this communication, they noted that they had received 921 device adverse event reports from these devices.

These adverse event reports included the following:

- **Device Migration** – 328 Reports
- **Device Embolization** – 146 Reports
- **Perforation of the Inferior Vena Cava** – 70 Reports

Our Law Firm's Victories

- $205 MILLION
- $171 MILLION
- $117 MILLION
Case reports

Female
34 years old

Symptom and sign;
Epigastric pain

Medical History;
IVC filter insertion due to floating IVC thrombus, 2 years ago

Test;
Gastro-duodenoscopy – sharp wire in the 3rd portion of the duodenum
Case reports
Female

75 years old

Symptom and sign;
Fever with leukocytosis, back pain

Medical History;
IVC filter insertion due to mechanical thrombectomy of iliac vein, 7 years ago

Test;
CT scan – metallic wire in the pancreas head
Endoscopic retrograde cholangiopancreatography – no duct injury
Case reports
Case reports

Female

39 years old

Symptom and sign;
  Intermittent abdominal pain without any GI symptom

Medical History;
  IVC filter insertion due to thrombogenic conditions (protein C deficiency), 3 years ago

Test;
  CT scan – penetration of vena cava filter legs
Case reports
Operation findings

All filters were tilted

The body and some legs were implanted in the endothelial layer

so, partial excision was performed on the IVC wall
Discussion
Declarations of interest: None !!!

Sorry...
Caval Penetration by Inferior Vena Cava Filters
A Systematic Literature Review of Clinical Significance and Management

Zhongzhi Jia, MD; Alex Wu, MD; Mathew Tam, MD; James Spain, MD, PhD; J. Mark McKinney, MD; Weiping Wang, MD

### Table 1. Summary of Filter Characteristics, Number of Penetration Cases, and Organ/Structure Involvement for Each Filter Type Based on the Literature From 1970 to 2014

<table>
<thead>
<tr>
<th>Filter Name</th>
<th>Manufacturer/Year</th>
<th>Filter Type</th>
<th>Basic Shape</th>
<th>Cases, n</th>
<th>Organs/Structures Involved,* n</th>
<th>Treatment/Outcome, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobin-Uddin</td>
<td>Edwards Laboratories/1970</td>
<td>Permanent</td>
<td>Double conical</td>
<td>3</td>
<td>3</td>
<td>Surgery, 2; death, 1</td>
</tr>
<tr>
<td>Greenfield</td>
<td>Boston Scientific/1973</td>
<td>Permanent</td>
<td>Conical (1-level filtration)</td>
<td>116</td>
<td>26</td>
<td>Surgery, 24; conservative†, 7; PCN+JJ stent, 1; unknown, 84</td>
</tr>
<tr>
<td>Bird’s Nest</td>
<td>Cook/1982</td>
<td>Permanent</td>
<td>4 Free struts (2 up, 2 down)</td>
<td>57</td>
<td>12</td>
<td>Retrieval, 1; surgery, 5; conservative, 3; stenting, 2; JJ stent, 1; unknown, 45</td>
</tr>
<tr>
<td>Amplatz</td>
<td>Cook/1984</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>5</td>
<td>0</td>
<td>Unknown, 5</td>
</tr>
<tr>
<td>Gunther Tulip</td>
<td>Cook/1992</td>
<td>Optional</td>
<td>Conical (half-basket)</td>
<td>407</td>
<td>66</td>
<td>Retrieval, 82; conservative, 5; surgery, 4; stenting, 1; embo, 1; unknown, 314</td>
</tr>
<tr>
<td>Celect</td>
<td>Cook/2005</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>341</td>
<td>148</td>
<td>Retrieval, 179; surgery, 10; stenting, 1; PCN, 1; unknown, 150</td>
</tr>
<tr>
<td>VenaTech LGM</td>
<td>Braun/1986</td>
<td>Permanent</td>
<td>Tubular</td>
<td>2</td>
<td>0</td>
<td>Unknown, 2</td>
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<tr>
<td>Simon Nitinol</td>
<td>Bard/1988</td>
<td>Permanent</td>
<td>Umbrella (2-level filtration, conical at bottom)</td>
<td>45</td>
<td>5</td>
<td>Retrieval, 3; stenting, 3; conservative, 1; unknown, 38</td>
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<tr>
<td>Recovery</td>
<td>Bard/2002</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>49</td>
<td>13</td>
<td>Retrieval, 20; surgery, 4; stenting+embo, 1; unknown, 24</td>
</tr>
<tr>
<td>G2</td>
<td>Bard/2005</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>111</td>
<td>13</td>
<td>Retrieval, 92; surgery, 6; stenting, 1; unknown, 11; death, 1</td>
</tr>
<tr>
<td>Eclipse</td>
<td>Bard/2009</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>4</td>
<td>2</td>
<td>Retrieval, 2; embo, 1; unknown, 1</td>
</tr>
<tr>
<td>TrapEase</td>
<td>Cordis/2000</td>
<td>Permanent</td>
<td>Double-basket</td>
<td>4</td>
<td>0</td>
<td>Surgery, 2; conservative, 2</td>
</tr>
<tr>
<td>OptEase</td>
<td>Cordis/2002</td>
<td>Optional</td>
<td>Double-basket</td>
<td>1</td>
<td>0</td>
<td>Surgery, 1</td>
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<tr>
<td>ALN</td>
<td>ALN/2008</td>
<td>Optional</td>
<td>Conical (2-level filtration)</td>
<td>10</td>
<td>2</td>
<td>Retrieval, 8; surgery, 2</td>
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<tr>
<td>Option</td>
<td>Argon Medical/2009</td>
<td>Optional</td>
<td>Conical (1-level filtration)</td>
<td>6</td>
<td>1</td>
<td>Retrieval, 6</td>
</tr>
<tr>
<td>Not specified</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>538</td>
<td>31</td>
<td>1699 (Retrieval, 677; surgery, 63; stenting, 8; embo, 2; PCN, 1; PCN+JJ stent, 1; JJ stent, 1; stenting+embo, 1; conservative, 94; unknown, 855; death, 2)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>1699</strong></td>
<td><strong>322</strong></td>
<td></td>
</tr>
</tbody>
</table>
Discussion
Discussion

Celect™ Platinum Vena Cava Filter
THANK YOU FOR YOUR ATTENTION
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