Visceral Artery Aneurysms (VAAs): Management, Surveillance and Natural History Analysis in a single UK centre over 10 years

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Disclosure

I do not have any potential conflict of interest.
Aims and Methods

• Visceral artery aneurysms (VAAs) are rare with a reported prevalence of 0.1 to 0.2%. \(^1,^2\)

• April 2017, ESVS published guidelines for the Management of the Diseases of Mesenteric Arteries and Veins. \(^3\)

• 12-year experience (so far the largest single centre experience in the UK) of natural history and surveillance of VAAs.

• Study of 80 patients (29 Men & 51 Women) with a total of 106 aneurysms over 12 year period (2006-2017).

• VAA grouped into 3 respective categories (Renal, Mesenteric & Splenic)

  *Mesenteric category included: hepatic, gastroduodenal, coeliac and pancreaticoduodenal*

• 7 VAA’s treated (embolisation)-no complications
Results (1)

<table>
<thead>
<tr>
<th>Type of VAA</th>
<th>Total No (%)</th>
<th>Male No. (%)</th>
<th>Female No. (%)</th>
<th>Mean age, years</th>
<th>Mortality No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesenteric</td>
<td>28</td>
<td>14 (61%)</td>
<td>8 (36%)</td>
<td>73</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Renal</td>
<td>25</td>
<td>6 (32%)</td>
<td>13 (68%)</td>
<td>70</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>Splenic</td>
<td>53</td>
<td>9 (23%)</td>
<td>30 (77%)</td>
<td>69</td>
<td>2 (4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of VAA</th>
<th>No. Monitored</th>
<th>Mean surveillance time, months</th>
<th>Mean initial size +/- SD, mm</th>
<th>Mean growth (mm)</th>
<th>No (%) that grew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesenteric</td>
<td>28</td>
<td>25</td>
<td>15</td>
<td>3</td>
<td>4 (14%)</td>
</tr>
<tr>
<td>Renal</td>
<td>25</td>
<td>28</td>
<td>14</td>
<td>4</td>
<td>3 (0.1%)</td>
</tr>
<tr>
<td>Splenic</td>
<td>32</td>
<td>37</td>
<td>17</td>
<td>1</td>
<td>12 (38%)</td>
</tr>
</tbody>
</table>
Results (2)

- Mean age across all categories = 70 yrs (Range 24-95 yrs)
- Mean size across all categories = 15mm
- Mean surveillance time = 31 months
- Mortality = 4 (5%) deaths – unrelated to VAA (2 malignancy, 2 cardiac/resp causes)
- Size Categories = 97 (92 %) ≤ 25mm and 8(8 %) > 25mm

Distribution of VAA's, by type

- Renal: 50%
- Splenic: 24%
- Mesenteric: 26%

Size Category of VAA

- ≤ 25mm
- >25mm
Results (3)

**Mesenteric**

- Size (mm) vs. Time (Years)
  - 2008 to 2017

**Renal**

- Size (mm) vs. Time (Years)
  - 2006 to 2017

**Splenic**

- Size (mm) vs. Time (Years)
  - 2006 to 2017
Conclusion

*Inter reporter variation* on CT scan reporting

ESVS recommendation – interval imaging every 2-3 years (<25mm VAA)

No clear evidence from our study that aneurysms grow to reach the cut-off treatment level

*Un-necessary exposure to radiation??*
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