Isolated Spontaneous Mesenteric Dissection: Most are benign
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Disclosures
• I have nothing to disclose

Celiac Dissection
• 100 cases reported in the literature
• Most asymptomatic

Yun WS et al. Eur J Vasc Endovasc Surg 2009

SMA Dissection
• The most common visceral dissection
• More frequently presents with abdominal pain

SMA Dissection
Yun WS et al. Eur J Vasc Endovasc Surg 2009

Management
• Conservative in most cases
  • Antiplatelet
  • Anticoagulation?
  • Bowel rest (TPN)
• Revascularization if intestinal ischemia
  • Rupture
  • Aneurysm
Purpose
Examine the natural history of patients presenting with isolated spontaneous mesenteric artery dissection

Hypothesis
Most spontaneous mesenteric artery dissections can be treated non-operatively

Results
77 total patients

<table>
<thead>
<tr>
<th>Presentation</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic</td>
<td>27 (35)</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>50 (65)</td>
</tr>
</tbody>
</table>
Results

<table>
<thead>
<tr>
<th>Features</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (range, years)</td>
<td>56 (26-86)</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>62 (81)</td>
</tr>
<tr>
<td>Medical Conditions</td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>48 (62)</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>27 (35)</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>5 (7)</td>
</tr>
<tr>
<td>Chronic Kidney disease</td>
<td>7 (9)</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease</td>
<td>2 (3)</td>
</tr>
<tr>
<td>Non-smoker</td>
<td>52 (69)</td>
</tr>
</tbody>
</table>

Results

Treatment by Presentation

<table>
<thead>
<tr>
<th></th>
<th>Observation</th>
<th>Antiplated</th>
<th>Anticoagulation</th>
<th>Invasive Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic</td>
<td>N=10</td>
<td>N=23</td>
<td>N=40</td>
<td>N=4</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>N=39</td>
<td>N=6</td>
<td>N=2</td>
<td>N=1</td>
</tr>
</tbody>
</table>

* p<.001   ** p<.001

CT angiogram

Three months later

- Presents to ED with intermittent abdominal pain
  - Therapeutic anticoagulation with warfarin
  - Antiplated tx with aspirin

CT angiogram - 3 months

CT angiogram - 2 years
Results

Number of Arteries

Improved Stable Mild Dilation

Follow Up Mean 21.2 months

Arterial Remodeling Over Time

CA
SMA

Interventional Procedures

<table>
<thead>
<tr>
<th>Artery</th>
<th>Initial Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both (SMA)</td>
<td>Anticoagulation, SMA endarterectomy, ileocolic endarterectomy and patch angioplasty within 24 hours</td>
</tr>
<tr>
<td>SMA</td>
<td>Anticoagulation, ilio-mesenteric bypass to a branch of the SMA within 24 hours</td>
</tr>
<tr>
<td>SMA</td>
<td>Anticoagulation, aorto-mesenteric bypass to branch of the SMA on hospital day 9 for SMA occlusion</td>
</tr>
<tr>
<td>Both (celiac)</td>
<td>Anticoagulation, aneurysmal dilation of the hepatic artery, stent graft placed at 8 weeks</td>
</tr>
</tbody>
</table>

55 y/o Male
1 week worse pain

Laparotomy
Thrombosed SMA Bypass to SMA branch 9 months post operative

**SMA Dissection**

- Majority symptomatic
- Non-operative management first
- Revascularization is effective for patients presenting with visceral ischemia
- Utilizing this algorithm, no patients required bowel resection for ischemia

**Celiac Dissection**

- Most patients can be managed with antiplatelet therapy
- Anticoagulation if luminal compromise
- Intervention reserved for complications
Celiac Dissection

- Male
- Conservative Rx
- Invasive Rx

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Male</th>
<th>Asymptomatic</th>
<th>Conservative Rx</th>
<th>Invasive Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanaka JVS 2018</td>
<td>39</td>
<td>94%</td>
<td>64%</td>
<td>82%</td>
</tr>
<tr>
<td>Lawrence JVS 2018</td>
<td>227</td>
<td>82%</td>
<td>71%</td>
<td>92%</td>
</tr>
<tr>
<td>Morgan JVS 2018</td>
<td>77</td>
<td>62%</td>
<td>35%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Segmental Arterial Mediolysis

- 1976 by Slavin and Gonzalez
- Cytoplasmic vacuolar degeneration SMC
- Segmental infiltrate PMN/histiocytes outer media
- Discontinuous mediolysis
  - Dissection
  - Rupture
  - Aneurysm
- Healing
  - Neovascularization media
  - Intimal Thickening

Visceral Dissection

- Likely due to SAM
- SAM-FMD

Visceral Dissection

- Management is non-interventional in the majority of cases
- Endovascular/open surgery reserved to treat complications
  - Ischemia
  - Rupture
  - Aneurysmal degeneration