Treatment of Visceral Aneurysms with MFM Multilayer Stent and Outcome

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Case 1

- 59-y-o ♀
- Asymptomatic 26mm saccular aneurysm of the left renal artery, calcified shell
- Large lower-pole artery arising from the aneurysm base
- No co-morbidities
**Case 1**

**Intervention:**
- 8F/ 55cm Cordis Vista Brite-Tip® Guiding Catheter
- 5F Sidewinder-1, Terumo Medical
- 0.035 Inch j-Tip hydrophilic Glidewire®, Terumo Medical
- 0.025 Inch Amplatz Wire, Cook© Medical
**MFM Stent - Visceral Aneurysms**

**Case 1**

**Intervention:**
- 3000 IU Heparin
- 6/30 mm Cardiatis MFM® stent
- 100mg Aspirin/d & 75mg Clopidogrel/d for 3 months
- 100mg Aspirin/d indefinitely
MFM Stent - Visceral Aneurysms

Case 1

1-year control, CTA

1-month control, CTA
## MFM Stent - Visceral Aneurysms

### Outcome

<table>
<thead>
<tr>
<th>Authors</th>
<th>Patients</th>
<th>Aneurysm types</th>
<th>Follow-up</th>
<th>Aneurysm thrombosis</th>
<th>Aneurysm shrinkage</th>
<th>Primary stent patency</th>
<th>Side-branch patency</th>
<th>Major Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruffino MA et al. J Cardiovasc Surg 2011;52:311-22</td>
<td>19</td>
<td>True visceral aneurysms</td>
<td>6 months</td>
<td>87.5% complete</td>
<td>75%</td>
<td>88.9%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Ruffino MA et al. J Endovasc Ther 2012;19:599-610</td>
<td>54</td>
<td>True and false, peripheral and visceral</td>
<td>12 months</td>
<td>93.3% complete</td>
<td>87.8%</td>
<td>86.9%*</td>
<td>96.1%</td>
<td>7%</td>
</tr>
<tr>
<td>Balderi A et al. Cardiovasc Interv Radiol 2013; 36:1256-1261</td>
<td>5</td>
<td>Visceral art. aneurysms</td>
<td>24 months</td>
<td>0% complete**</td>
<td>40%</td>
<td>60%</td>
<td>100%</td>
<td>n.a.</td>
</tr>
<tr>
<td>Sultan S et al. Open Heart 2016; 3:e000320</td>
<td>2</td>
<td>Renal art. aneurysms</td>
<td>27 months</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Sfyroeras GS et al. J Vasc Surg 2012; 56:839-846</td>
<td>31</td>
<td>Visceral subgroup of meta-analysis of 14 papers</td>
<td>9.2 months</td>
<td>90.6%</td>
<td>81%</td>
<td>90.3%***</td>
<td>100%</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

* Stent occlusions were mainly due to inadequate uptake of anti-platelet medication or poor peripheral run-off vessels
** 20% (1 pat.) complete aneurysm reperfusion after 24 months
*** All occlusions occurred within the first month
Case 2

- 19-y-o ♂
- Fibromuscular Dysplasia
- Renovascular Hypertension

Intervention: 6/60mm Cardiatis MFM® stent

Conclusion

Flow-Diverting stents in visceral artery aneurysms

• Useful in particular cases for saving important side-branches
• Promising outcomes with high percentage of aneurysm thrombosis and shrinkage
• No reported aneurysm rupture
• However: No 100% rate for stent patency, aneurysm thrombosis or shrinkage
• Need time for action; reserved for aneurysms without evident or pending rupture
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