A new concept to evaluate decision making factors for complex aortic pathologies

Konstantinos P. Donas, Giovanni F. Torsello, Giovanni B. Torsello

St. Franziskus Hospital, University of Münster, Germany
Disclosure

Speaker name:

......K. Donas

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
Complex aortic pathologies

- Aneurysms/PAUs
- Para-anastomotic aneurysms
- Type IA endoleaks
Theoretical Approach at Congress

- EVAR
- FEVAR
- CHEVAR
- OPEN REPAIR
Clinical reality in the hospital
Clinical reality in the hospital
Factors Influencing Decision Making in the Treatment of Complex Pararenal Aortic Pathologies: The APPROACH Concept

Konstantinos P. Donas, MD, PhD, Giovanni F. Torsello, MD, and Giovanni B. Torsello, MD
Anatomy of the pathology
Patient’s clinical profile
• Demographics

• Comorbidities

• Age/Life expectancy
Proven literature evidence
CASE SERIES, RCT’S, PROPENSITY MATCHED ANALYSIS ETC?
Renovisceral morphology
RENOVISCERAL MORPHOLOGY
Operator preferences and skills
Device selection

Nitinol Endoskeleton  Stainless Steel Endoskeleton
Access
ACCESS FROM THE UPPER EXTREMITY
Type III AORTIC ARCH AND KINKING OF THE THORACIC AORTA
- Costs
Costs and cost-effectiveness
Hostile neck
HOSTILE NECK: “NOT ALL NECKS ARE THE SAME”
HOSTILE NECK
GOALS OF THE APPROACH CONCEPT

✓ Identification of the reasons influencing the selection of treatment options

✓ Design of studies that incorporate these factors reflecting clinical reality and not a theoretical explanation
Endovascular masterclass 2.0 meeting

ON SITE PHYSICIANS OVERVIEW

- 9 yrs experience: **35%**
- 7-9 yrs experience: **22%**
- 5-7 yrs of experience: 18%
- 3-5 yrs of experience: 22%
- **35%** Head of Department
- **40%** leading Consultant
- **25%** Consultant

Vascular Specialists

- Vascular Surgeon: 79%
- IR: 9%
- IC: 3%
- CV surgeon: 1,50%
Main decision making factors to choose best APPROACH
What’s the least important?
<table>
<thead>
<tr>
<th>Needed proximal neck length</th>
<th>Max. Infrarenal neck angulation</th>
<th>Max. Main body Fr size OD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 mm</td>
<td>60°</td>
<td>20Fr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Needed infrarenal neck length</th>
<th>Max. infrarenal neck angulation</th>
<th>Max. Main body Fr size OD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mm</td>
<td>60°</td>
<td>20 Fr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proximal neck length</th>
<th>Infrarenal neck angulation</th>
<th>Max. Main body Fr size OD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>45°</td>
<td>22-25</td>
</tr>
</tbody>
</table>
CREATION OF THE **APPROACH** Concept Score System (ACSS)

<table>
<thead>
<tr>
<th></th>
<th>Anatomy</th>
<th>Proven literature evidence</th>
<th>Patient profile</th>
<th>Renovisceral morphology</th>
<th>Operateur preference</th>
<th>Access</th>
<th>Costs</th>
<th>Hostile neck</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH-EVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-EVAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1st option | 2nd option | 3rd option | 4th option