UPDATE ON EXPERIENCE TREATING AORTIC DISSECTIONS WITH MFM BARE STENTS

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Aortic Dissection

2 years FU

Sibiu experience – 14 cases

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (%)</th>
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<tbody>
<tr>
<td>Sex: male:female</td>
<td>12 (86)</td>
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<tr>
<td>Hypertension</td>
<td>10 (71)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3 (21)</td>
</tr>
<tr>
<td>Renal insufficiency</td>
<td>1 (7)</td>
</tr>
<tr>
<td>Chronic pulmonary disease</td>
<td>3 (21)</td>
</tr>
<tr>
<td>Previous aortic procedure</td>
<td>5 (36)</td>
</tr>
<tr>
<td>Previous abdominal surgery</td>
<td>1 (7)</td>
</tr>
<tr>
<td>Prior cardiac surgery</td>
<td>2 (14)</td>
</tr>
<tr>
<td>Prior MVP class IV</td>
<td>2 (14)</td>
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<tr>
<td>Mean proximal aorta</td>
<td>88 (65 - 76)</td>
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</table>

Global Registry Study

Aortic Dissection ET

TYPE A DISSECTION
KYNETIC elephant trunk (n=4)
Aortic Dissection

TYPE B DISSECTION
(n=10)

1. Endov Elephant trunk – 2 cases

Endov Elephant trunk – 2 cases

Endov Elephant trunk – 2 cases

Endov Elephant trunk – 2 cases
2. Total Endov aortic repair – 8 cases

6 months

2 years follow-up

True and fals lumen

Complete aortic remodelling
Aortic Dissection

HISTOPATHOLOGY SUMMARY:

- Submitted for H&E (hematoxylin and eosin) staining, which is a standard method for staining tissue samples to reveal the cell structure.
- Staining for collagen and other extracellular matrix components.
- Immunohistochemistry for specific proteins or antigens.
- Special stains to highlight particular features of the tissue.

PATHOLOGY SUMMARY:

- Grossly, the aortic dissection appears as a linear tear in the aortic wall, typically involving the intimal layer.
- Histologically, the dissection is characterized by the presence of intramural hematoma, which is a collection of blood within the aortic wall.
- The dissection involves the media and adventitia layers of the aorta, with areas of disruption and separation of the layers.
- The intima is often spared, with the tear initiating in the intimal layer and propagating into the media.

MFM Results

- MFM (Medtronic Freedom Medical) results indicated successful deployment and fixation of the device.
- Post-procedural imaging confirmed the integrity of the aortic wall and absence of leaks or dissections.
- Clinical follow-up showed improvement in patient symptoms and stabilization of theaneurysmal size.

Polisano European Hospital

Integrated structure of medical centers
Global Registry Study

At 12 Months Results Are Superior to INSTEAD, IRAD, ADSORB Studies

Types of Dissection Managed By MFM

- A total of 14 patients, mean age 53 years (27-70 years) were treated

| Total of type B dissection - BMFM | 10 |
| Type A followed by TEVAR for symptomatic Type B | 3 |
| Type A requiring immediate TEVAR for severe malperfusion syndrome after surgery | 1 |

Procedural data

Table 2: Transverse diameters of the true lumen – Maximum Compression Plane

| Transverse diameters (mm) of the true lumen |  |
|------------------------------- |  |
| Baseline | 6.1 ± 2.4 (n=14) |
| Post procedure | 24.5 ± 6.9 (n=14) |
Table 3: Volume measurements of the true lumen pre- and post-surgery for 14 patients with CT imaging available for both time points.

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<tr>
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<th>Total Volume (mm³)</th>
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<tr>
<td>Baseline</td>
<td>58.06 ± 33.8 (n=14)</td>
</tr>
<tr>
<td>Post procedure</td>
<td>122.91 ± 43.81 (n=14)</td>
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</table>

Results

- No Dissection-Related Death (no post-operative deaths in the first 3 years)
- No Paraplegia Nor Stroke
- No Renal Impairment
- No Loss of Branch Patency
- No Rupture
- No Device Failure

Conclusion

- Protection from rupture is achieved immediately after implantation with minimum morbidity and no mortality
- Up to 3 years clinical follow up and CFD data proves the durability of the aortic remodeling achieved with MFM stents in aortic dissection
- MFM technology offers immense promise in the treatment of complex aortic dissections

THANKS!

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THANK YOU!