IMMEDIATE AND LONG-TERM RESULTS OF STENTING OF THE PROXIMAL BRANCHES OF THE AORTIC ARCH

A. Frantsevich, MD., PhD,
V. Tsygankov, MD., PhD.
Material and methods

- From 1999 to 2015 years from 167 consecutive patients with hemodynamically significant stenosis and/or occlusions were performed 179 endovascular interventions. Some patients were operated several times: in 10 cases twice and 1 three times.
Material and methods

- It was operated 117 (65.4%) males and 62 (34.6%) women.
- The age of patients ranged from 38 to 84 years, median age 60 [55; 65] years.
- The median age of men was 59 [54; 64] years, female 61 [56; 67].

<table>
<thead>
<tr>
<th>Patient Characteristics</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>108</td>
<td>60.3%</td>
</tr>
<tr>
<td>Previous IM</td>
<td>50</td>
<td>27.9%</td>
</tr>
<tr>
<td>Carotid stenosis</td>
<td>104</td>
<td>58.1%</td>
</tr>
<tr>
<td>Lower extremity PAD</td>
<td>60</td>
<td>33.5%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>162</td>
<td>90.5%</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>69</td>
<td>38.5%</td>
</tr>
<tr>
<td>Smoker</td>
<td>114</td>
<td>63.7%</td>
</tr>
</tbody>
</table>
Immediate Results

• In 99.4% cases was achieved angiographic and clinical success.
• In all patients the symptoms of VBI and ischemia of the upper extremities regressed. Duplex ultrasound in the postoperative period: the nature of blood flow – mains, the gradient of arterial pressure on upper extremities no.
• The cumulative incidence of local complications of endovascular reconstruction of the proximal segments of the aortic arch branches was 3.9%.
• A cerebrovascular accident developed in 1 (0.6%) case during stenting of the brachiocephalic trunk, in the future which caused his death.
Long-term results

- Follow-up examination was performed up to 15 years after revascularization by 136 (76%) patients.
- In 7 (5.2%) cases there was destruction of the stents, in 3 patients in connection with the return of symptoms of vertebrobasilar insufficiency required the re-interventions, implantation of stent-in-stent.
- In 2 cases there was occlusion of the stents in the period of 1 year against the refusal of patients from the dual antiplatelet therapy, the lifting of taking statins.
- In 1 case the patient after joint replacement of the CCA developed a stroke in the ipsilateral pool
### Kaplan – Meier curve

<table>
<thead>
<tr>
<th></th>
<th>24 months</th>
<th>48 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Patency</strong></td>
<td>97.6%</td>
<td>93.4%</td>
</tr>
<tr>
<td><strong>Neurological Efficiency</strong></td>
<td>99.1%</td>
<td>94.5%</td>
</tr>
<tr>
<td><strong>Freedom fr Restenosis</strong></td>
<td>97.8%</td>
<td>93.1%</td>
</tr>
</tbody>
</table>
Case 1

Self-expandable stent 9x80 mm

Ballon-expandable stent 10x30 mm

Self-expandable stent 9x120 mm

occlusion
Ballon-expandable stent 10x30 mm
Case 2
Case 3
Conclusion


- Stenting of the proximal segments of the aortic arch branches should be considered as first method of choice of treatment, since high performance has a low risk of complications and good long-term results.

- Restenosis and stent destruction do not always lead to the development of the clinic VBI, therefore, to the necessity of repeated interventions.

- Stenting of BCT, CCA should be performed only with the use of active systems for the prevention of the brain from embolism.
IMMEDIATE AND LONG-TERM RESULTS OF STENTING OF THE PROXIMAL BRANCHES OF THE AORTIC ARCH

A. Frantsevich, MD., PhD,
V. Tsygankov, MD., PhD.