Carotid surgery in patients with contralateral occlusion: no shunt or endovascular.

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Disclosure

Speaker name:

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
Objective

to evaluate and to compare the results of treatment in patients with contralateral occlusion of internal carotid arteries (ICA)
How to choose

• Texakalidis P. et al. report: Patients with contralateral carotid occlusion (CCO) can safely undergo both CAS and CEA with similar risks of stroke, MI, and MACE.

• Cheng W. et al. report: The presence of CCO results in higher rate of preoperative symptoms and increases perioperative risk of neurological complications in CEA, but do not have a significant impact on the perioperative mortality rate and the stroke-free survival rate at 5 years.

• Pascot et al. report: The use of a shunt and presence of ipsilateral vertebral stenosis are risk factors for perioperative embolism.

• And many other controversial papers...

• Surgeon’s experience

• Anesthesiologic support


### Materials and methods

#### Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>CEA (n=15)</th>
<th>CAS (20)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y, mean</td>
<td>59</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>6 (40 %)</td>
<td>13 (65 %)</td>
<td>NS</td>
</tr>
<tr>
<td>Arterial hypertension</td>
<td>12 (80 %)</td>
<td>17 (85 %)</td>
<td>NS</td>
</tr>
<tr>
<td>Diabetes</td>
<td>5 (33.3 %)</td>
<td>2 (10 %)</td>
<td>NS</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>11 (73.7 %)</td>
<td>15 (75 %)</td>
<td>NS</td>
</tr>
<tr>
<td>Smoking</td>
<td>10 (66.6 %)</td>
<td>14 (70 %)</td>
<td>NS</td>
</tr>
</tbody>
</table>

- Asymptomatic >65% ICA (28 pt/80%)
- Symptomatic >50% ICA (7 pt/20%). mRS <2

- and only overall 20% with different kinds of Willis circle incompetence*

*according CT angio*
Crucial points

• Suitable to any technique
• Willis circle completeness
• Vertebral arteries and external carotid arteries condition
• “Matas” intraoperative testing (retrograde blood pressure in ICA)
• Cerebral oximetry
Results

<table>
<thead>
<tr>
<th></th>
<th>CEA (n=15)</th>
<th>CAS (n=20)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-d mortality</td>
<td>0</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>30-d TIA/stroke</td>
<td>1</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Restenosis</td>
<td>1</td>
<td>1</td>
<td>NS</td>
</tr>
</tbody>
</table>

For CEA
• Sufficient retrograde blood flow in all cases
• Clamping mean 21 min
• Eversion CEA in 66.7 %

For CAS
• 1 pt with ICA tortuosity after catheterization, but…

But what about Willis circle (20%)..
Conclusion

• Shunt use isn’t mandatory in carotid surgery
• Presence of risk factors, neurological status, anatomy of CA affect to the choice of tactics of surgical treatment
• CAS is method of choice
• We suppose experience of any clinic is no less important factor
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