DEBATE:
Early CAS From 2-7 Days After Neurologic Symptom Onset Has Increased Risk: CEA From 2-7 Days After Symptom Onset Has No Increased Risk: When Safe, When Not

H.-H. Eckstein
Department for Vascular and Endovascular Surgery, Klinikum Rechts der Isar, Technical University of Munich, Germany

Financial Disclosures

- Collaborator in clinical trials with the T-CAR System (Silkroad)
- Research grants from COOK, MEDISTIM, MEDTRONIC, DFG (unrelated to this talk)

Recurrence risk of cerebrovascular events in pts with symptomatic carotid stenosis is up to 20% within 7 days

How safe are CEA and CAS in the early period after the index event and what happens in the „REAL WORLD“?

German Carotid Registry: >56,000 elective CEAs and >4,700 CAS

Overall stroke/death rates:
- CAS: 3.7% / CEA: 2.5%

WHAT DO RCTs TELL US?
Early Endarterectomy Carries a Lower Procedural Risk Than Early Stenting in Patients With Symptomatic Stenosis of the Internal Carotid Artery

**Stroke Results From 4 Randomized Controlled Trials**

Carotid Stenosis Trialist Collaboration
- 4,138 symptomatic patients
- Randomised to CEA or CAS within CREST 1, SPACE 1, ICSS 1, EVA3-S
- Any stroke or death rates within 30 days
- CEA and CAS: 0-7 or >7 days after the neurological index event

Any stroke/death after CEA and CAS <7 d versus >7 d

Rantzer et al, CSTC, STROKE 2017

<table>
<thead>
<tr>
<th>Procedure</th>
<th>0-7 days</th>
<th>&gt;7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEA</td>
<td>3.6%</td>
<td>7.1%</td>
</tr>
<tr>
<td>CAS</td>
<td>1.3%</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

CAS had a substantially higher periprocedural risk, which was 6-8 times higher within 7 days and about 2 times higher after 7 days

This was true for: any stroke/death, any stroke alone, fatal/disabling stroke

**WHAT DO GUIDELINES RECOMMEND US?**

Timing of CEA or CAS - guideline recommendations

- Revascularization of symptomatic 50-99% carotid stenoses as soon as possible, preferably within 14 days
- Pts who are to undergo revascularization within the first 14 days after onset of symptoms should undergo CEA, rather than CAS

**ESVS 2017**

Combined stroke and/or death rate within 30 days
- CEA <48h versus >48h: 8% versus 2.9% (OR 2.9; 95%CI 1.02-8.23)
- Pts with a “stroke” as indicator event had an high risk if operated <48h (15%)
- Crescendo TIAS were included

EJSVES 2017
Conclusions

- **CEA** is safe within the first days after TIA and AF.
- **In stroke pts.** the timing of CEA should be individualized (neurological plateau phase).
- **CAS** should be avoided within the first 7 days.

---

**Don’t forget:**

It’s not the stenosis...  
... but the brain.

“Don’t hurt my brain.  
It’s my second favorite organ”

---

**Thank you very much**

H.-H. Eckstein  
Department for Vascular and Endovascular Surgery, Klinikum rechts der Isar (M5), Munich, Germany