Early CEA (<2 weeks) of symptom onset carries no increased risk, even if patient is on dual antiplatelet therapy

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Leicester Royal Infirmary
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I have no conflict of interest

Early carotid endarterectomy in symptomatic patients is associated with poorer perioperative outcomes


Delay to surgery strokes prevented @ 5 years per 1000 CEAs

ECST/NASCET/VA 21%
Fairhead Neurology 2005 20%
Purroy Stroke 2007 10%
Olı Stroke 2009 17% 22% 25%
Bonifati Stroke 2011 8%
Johannsones Stroke 2013 5% 8% 11%
Mooi Neurosurg 2013 4%
Merrin Stroke 2012 8%
Mamme Stroke 2014 5% 9% 9% 16%

Stroke risk after TIA (50-99% stenosis)

Stroke risk after TIA (50-99% stenosis)
**whom would you rather be?**

**Surgeon A**
who performs CEA within 2 weeks with a 10% risk of death/stroke

**Surgeon B**
who waits 4 weeks but then operates with a 0% procedural risk

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**procedural risk after urgent CEA**

<table>
<thead>
<tr>
<th>30-day death/stroke</th>
<th>n=</th>
<th>0-48 hrs</th>
<th>3-7 days</th>
<th>8-14 days</th>
<th>&gt;14 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden Stroke 2012</td>
<td>2,596</td>
<td>11.5%</td>
<td>3.6%</td>
<td>4.0%</td>
<td>5.4%</td>
</tr>
<tr>
<td>UK NVR 2015</td>
<td>19,178</td>
<td>4.1%</td>
<td>2.8%</td>
<td>2.4%</td>
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</tr>
<tr>
<td>Germany AVE 2013</td>
<td>47,653</td>
<td>3.0%</td>
<td>2.5%</td>
<td>2.8%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

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**delay, procedural risk & patient benefit**

[Graph showing strokes prevented per 1000 CEAs at 5 years]

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**30-day death/stroke**

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**TIA/minor stroke**

patient seeks medical advice & started on Aspirin + Statin
seen in daily TIA clinic
BMT + risk factor correction
CT/MRI + Duplex US
50-99% ICA stenosis transferred to Vascular Unit
expedited CEA after workup

---

212 patient Audit
28 (13%) had recurrent CVA/TIA prior to CEA
Salem EJVES 2011
Ali EJVES 2013
suspected TIA/minor stroke
patient seeks medical advice
300mg Aspirin + 40mg Simvastatin
triage (based on ABCD² score)
seen in TIA clinic
BMT + risk factor assessment
CT/MRI & Duplex US
50-99% ICA stenosis transferred to Vascular Unit
expedited CEA after workup
75mg Clopidogrel night before CEA

suspected TIA/minor stroke
patient seeks medical advice
300mg Aspirin + 40mg Simvastatin
triage (based on ABCD² score)
seen in TIA clinic
BMT + risk factor assessment
CT/MRI & Duplex US
if no ICH, 75 Clopidogrel started
50-99% ICA stenosis transferred to Vascular Unit
expedited CEA after workup
dual antiplatelet Rx throughout

Results

recurrent events between admission and CEA

<table>
<thead>
<tr>
<th>current audit</th>
<th>preceding audits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/100 (3%)</td>
<td>28/212 (13%)</td>
</tr>
</tbody>
</table>

OR 4.9 (95%CI 1.5-16.6); p=0.01

30-day morbidity/mortality

<table>
<thead>
<tr>
<th>current audit (n=100)</th>
<th>previous audits (n=212)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-day death/stroke</td>
<td>1 (1%) 3 (1.4%)</td>
</tr>
<tr>
<td>intracranial haemorrhage</td>
<td>1 (1%) 0 (0%)</td>
</tr>
<tr>
<td>re-expansion for neck haematoma</td>
<td>1 (1%) 7 (3.3%)</td>
</tr>
<tr>
<td>shin haematoma</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

Guidelines for treating post-CEA hypertension

arnaylor@hotmail.com

UK National Vascular Registry

2013 Report on Surgical Outcomes
Consultant-level statistics
Carotid Endarterectomy

University Hospitals of Leicester NHS Trust
Mr Matthew Bown 4435394 14 14 0.0% ▲
Professor Nick London 2627946 * * * ▲
Mr Matthew McCarthy 3441365 63 63 1.6% ▲
Mr Kevin Molloy 4399359 21 21 4.8% ▲
Mr Akhtar Nasim 3486272 71 71 0.0% ▲
Professor Ross Naylor 2552073 165 165 1.8% ▲
Mr Robert Sayers 2854672 14 14 0.0% ▲

 Arnaylor@hotmail.com

OR 4.9 (95%CI 1.5-16.6); p=0.01

11/20/2015
# Stroke Risk After TIA (50-99% Stenosis)

<table>
<thead>
<tr>
<th>Study</th>
<th>48h</th>
<th>72h</th>
<th>7d</th>
<th>14d</th>
<th>5 yrs</th>
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</thead>
<tbody>
<tr>
<td>ECST/NASCET/VA BMT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21%</td>
</tr>
<tr>
<td>Fairhead Neurology 2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Putsay Stroke 2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Cks Stroke 2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17%</td>
</tr>
<tr>
<td>Bonifati Stroke 2011</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johansson Int J Stroke 2013</td>
<td>5%</td>
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<td></td>
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