First Week Appears to be Critical Time for CEA After Stroke Event: Study


CHICAGO, Illinois, December 2017 – A newly published analysis suggests that the optimal timing of a carotid endarterectomy is after 48 hours but within the first week after a major or minor stroke.

The decision for neurologists and surgeons alike concerns the balance between subjecting recently injured brain tissue to early carotid revascularization and risking recurrent stroke by delaying carotid endarterectomy. Carotid endarterectomy is an effective therapy for preventing stroke, but the timing is critical and controversial.

Recent guidelines from the European Society for Vascular Surgery recommend that intervention with carotid endarterectomy be performed within 14 days after symptom development in most patients with a 50-99% carotid artery stenosis.

As reported in the December edition of the Journal of Vascular Surgery, researchers from the University of Pittsburgh and Boston Medical Centers, led by vascular surgeon Mohammad H. Eslami, MD, MPH, addressed the issue of timing of CEA specifically following stroke.

They retrospectively evaluated 989 patients registered in the Vascular Study Group of New England between 2003-2014 who suffered a stroke and subsequently underwent CEA. They divided the patients into four cohorts based on timing of CEA: <2, 2-5, >6 days following stroke and within the same hospital stay; and >6 days following the stroke, discharged, and re-admitted for surgery.

The significant results of this study included:

<table>
<thead>
<tr>
<th>Group</th>
<th>&lt;2d</th>
<th>2-5d</th>
<th>&gt;6d, same admission</th>
<th>&gt;6d, later admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number patients</td>
<td>96</td>
<td>322</td>
<td>94</td>
<td>477</td>
</tr>
<tr>
<td>Stroke</td>
<td>7.3%</td>
<td>4.0%</td>
<td>2.1%</td>
<td>1.7%</td>
</tr>
<tr>
<td>MI</td>
<td>2.1%</td>
<td>1.9%</td>
<td>2.1%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Death</td>
<td>1%</td>
<td>1.6%</td>
<td>1.1%</td>
<td>1%</td>
</tr>
</tbody>
</table>
“CEA performed within two days of the index event carries a statistically significant higher risk of stroke compared to the other cohorts in this series of patients. Surgery performed within two to five days may be similar to a later CEA in neurologically stable stroke patients in terms of peri-operative stroke,” notes senior author Mohammad H. Eslami, MD. “Balancing the higher risk of postoperative stroke with the early risk of recurrent stroke, it appears prudent to avoid repair within the first two days but consider intervening during the index hospital stay in stable patients.”

It was additionally noted that endarterectomy is increasingly being offered the same hospital stay as the index event. In 2003, over 60% of patients were discharged and re-admitted for surgery compared to 30% in 2014.

This study carries the limitations of a retrospective analysis as well exclusion of patients presenting with transient ischemic attack.

Overall, in carefully selected patients with non-disabling stroke, revascularization is recommended beyond 2 days but within the first week of the same hospital stay to decrease the risk of recurrent stroke.

To download the complete article (link available from 11/20/2017 through 1/31/2018), click: vsweb.org/JVS-CEA

For information patients may be interested in:

Regarding carotid artery disease -
https://vascular.org/patient-resources/vascular-conditions/carotid-artery-disease

Regarding stroke -
https://vascular.org/patient-resources/vascular-conditions/stroke

Regarding carotid duplex imaging -
https://vascular.org/patient-resources/vascular-tests/carotid-duplex

Regarding CTA and MRA -

Regarding carotid endarterectomy -
https://vascular.org/patient-resources/vascular-treatments/carotid-endarterectomy

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The Journal of Vascular Surgery (JVS) is dedicated to the science and art of vascular surgery and aims to be the premier international journal of medical, endovascular and surgical care of vascular diseases. The goal of the journal is to improve the management of patients with vascular diseases by publishing relevant papers that report important medical, surgical and endovascular advances, test new hypotheses and address current controversies.

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