Carotid Intervention in Asymptomatic Patients

To the Editor:

I read with interest the commentary by Dr Qureshi regarding the present guidelines for carotid angioplasty and stenting.1 I agree with the conclusion regarding the need for further data from randomized controlled trials to clarify the present guidelines. However, the author also mentions one present indication for carotid stenting from the The Collaborative Panel of the American Society of Interventional and Therapeutic Neuroradiology, the American Society of Neuroradiology and the Society of Interventional Radiology to include “asymptomatic stenosis ≥90% or near occlusion in high surgical risk patients or those who refuse to undergo carotid endarterectomy after proper informed consent”.1 The present evidence for performing any carotid intervention in patients with asymptomatic carotid stenosis is based on 2 randomized controlled trials which compared carotid endarterectomy and medical therapy (Table).2,3 These 2 trials showed an overall reduction of stroke from ~12% to 6% at 5 years.2,3 This was achieved with a very low procedural risk of stroke or death of <3% (see Table). The trials did not demonstrate a clear high-risk subgroup of patients with asymptomatic carotid stenoses on medical treatment. In particular these trials demonstrated no relationship between benefit of carotid intervention and severity of carotid stenosis (Table). This finding is disparate to that of symptomatic carotid stenosis where there is a relationship between stenosis severity and stroke risk on medical therapy, although interestingly near occlusive lesions are at reduced risk and therefore benefit little from surgery.4 The Stenting and Angioplasty with Protection in Patients at High Risk of Endarterectomy Study is the only trial that has supported any advantage of stenting over endarterectomy.5 The perioperative stroke and death rate in the 159 patients who actually received stenting in this study was 4%, ie, higher than achieved in the 2 trials demonstrating benefit of surgery over medical therapy for asymptomatic carotid stenosis.2,3 The perioperative outcome in other trials of carotid stenting (and surgery) has been considerably worse.6,7 The stroke risk associated with asymptomatic carotid stenosis treated medically is low and particularly in patients with major comorbidities (often identified as high risk for surgery), where survival is limited, intensive medical therapy rather than stenting or surgery would appear appropriate at present, irrespective of lesion severity.

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Disclosures

None.

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Table. Medical and Surgical Treatment for Asymptomatic Carotid Stenosis

<table>
<thead>
<tr>
<th>Stenosis (time)</th>
<th>Medical</th>
<th>Surgery</th>
<th>Stenosis (time)</th>
<th>Medical</th>
<th>Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>All (30 days)</td>
<td>834</td>
<td>0.4% (NA)</td>
<td>825</td>
<td>2.3% (1.5%)</td>
<td>1560</td>
</tr>
<tr>
<td>60%–69%†</td>
<td>131</td>
<td>11.4%</td>
<td>137</td>
<td>6.3%</td>
<td>643</td>
</tr>
<tr>
<td>70%–79%†</td>
<td>94</td>
<td>6.7%</td>
<td>93</td>
<td>2.2%</td>
<td>455</td>
</tr>
<tr>
<td>80%–99%†</td>
<td>88</td>
<td>3.7%</td>
<td>99</td>
<td>2%</td>
<td>462</td>
</tr>
</tbody>
</table>

*Row 2 reports any stroke or perioperative death by intention to treat (shown in parentheses are the percentage incidence of perioperative stroke or death directly attributable to surgery) and rows 3–5 report perioperative stroke or death and ipsilateral stroke estimated at 5 years; †based on patients who have angiograms only; ‡based on ultrasound; **Row 2 reports any stroke or perioperative death by intention to treat (shown in parentheses are the percentage incidence of perioperative stroke or death directly attributable to surgery) and rows 3–5 report bilateral carotid territory stroke estimated at 5 years but excludes perioperative events (to estimate this add 2.6% to the surgical group and 0.7% to the medical group).

NA indicates not available.

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