Treatment of internal carotid artery NEar occlusion (NEON study): An individual patient data meta-analysis

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ABSTRACT

- ESVS guideline recommendation: Best Medical Therapy (BMT)
- Based on Level III, class C (2003)
- ICA NO deemed high risk subgroup for surgery
- Excluded for randomized controlled trials (RCT)
- Now only observational studies available

INTRODUCTION

To determine the optimal treatment approach in patients with an internal carotid artery near occlusion (ICA NO)

METHODS

- Systematic search MEDLINE, EMBASE and Cochrane databases (01/2018)
- Primary outcome: any stroke or death <30 days (multivariate mixed effect logistic regression with correction for confounders: age, gender, symptom status and center)
- Secondary outcome: any stroke or death >30 days up till one year (Kaplan-Meyer survival curve)

RESULTS

<table>
<thead>
<tr>
<th>Baseline characteristics:</th>
<th>CEA n=334, 48%</th>
<th>CAS n=227, 32%</th>
<th>BMT n=142, 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (IQR)</td>
<td>69 (59-71)</td>
<td>71 (64-76)</td>
<td>63 (61-73)</td>
</tr>
<tr>
<td>Male, %</td>
<td>72</td>
<td>88</td>
<td>81</td>
</tr>
<tr>
<td>Ax</td>
<td>5</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>TIA</td>
<td>57</td>
<td>29</td>
<td>45</td>
</tr>
<tr>
<td>Stroke</td>
<td>38</td>
<td>54</td>
<td>56</td>
</tr>
<tr>
<td>Antiplatelet, %</td>
<td>NA</td>
<td>NA</td>
<td>99</td>
</tr>
<tr>
<td>Statin, %</td>
<td>NA</td>
<td>NA</td>
<td>85</td>
</tr>
</tbody>
</table>

Stroke/Death <30 days:

- CEA: 2.4% (n=8)
- CAS: 2.2% (n=5)
- BMT: 4.9% (n=7)

BMT vs CEA OR 5.63 (95% CI 1.3-24.45, p=0.021)

Stroke/Death >30 days:

- CEA vs CAS OR 0.62 (95% CI 0.06-6.11, p=0.682)

CONCLUSION

BMT is not superior to CEA or CAS with respect to 30-day or 1-year stroke/death prevention in patients with internal carotid artery near occlusion.

DISCLOSURES

None