Long-Term Relative Survival in Elderly Patients After Carotid Endarterectomy

To the Editor:

The study by Norman et al was a retrospective study of patients with symptomatic carotid stenoses undergoing carotid endarterectomy over a 10 year period from 1988–1998. Data were collected from multiple centers with multiple operating surgeons using the Western Australia Data Linkage system.

The total population was 1796 patients, which was divided into patients under 80 years (n=1645) and those aged 80 years and over (n=151). Mean follow-up was 4.7 years.

Cumulative survival at 5 years was 80% for those under 80 years and 65% in the older group. Relative survival at 5 years was 95% in the under 80 years group and 118% in the older group.

The authors concluded that morbidity and mortality were not statistically greater in an older age group. Higher stroke rates have been reported in octogenarians and this population may benefit more from surgical intervention.

We feel that this is a clinically important issue as prior major carotid surgery trials have not considered the over 80 years age group, which is a population with higher stroke rates and a greater risk of recurrences. The authors have presented clear objectives and have a large patient population in total. Analysis was performed with appropriate statistical methods and they state clear conclusions. However, on division of the population into the 2 groups, there are adequate numbers in the under 80 years group (n=1645) but not in the over 80 years group (n=151). This small number (151 patients) might not have the power to detect true differences in mortality and may produce a Type 2 error.

The 2 study groups may not be comparable as data were collected from multiple centers and multiple operating surgeons, possibly with different selection criteria. As stated in the paper, the older age group was carefully selected and this may explain the higher relative survival in this group. This may reflect a set of surgeons with enthusiasm for performing carotid endarterectomy in patients over 80 years who would accordingly select older patients more stringently than the younger group. This is probable given that this is a multicenter study with multiple operating surgeons where not all surgeons would elect to perform carotid endarterectomy in the over 80 years age group.

We feel that the best method of evaluating efficacy of carotid surgery in the over 80 years group would be with a randomized controlled trial. Such a trial would only include octogenarians who are selected by preset criteria and then randomized to receive medical treatment or surgical treatment with carotid endarterectomy. The population can then be followed for an adequate period to assess mortality and morbidity of carotid endarterectomy in octogenarians.
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