Internal Carotid Endarterectomy In Asymptomatic Octogenarians, Analysis Of Long-Term Outcome

Gregor Siegl, MD, Medical University Graz, Graz, Austria
Peter Konstantiniuk, MD, Medical University Graz, Graz, Austria
Tina Cohnert, MD, Medical University Graz, Graz, Austria

Introduction

Internal carotid endarterectomy in asymptomatic octogenarian patients is a subject of high controversy. The goal of this ongoing retrospective investigation is to determine general risk-factors and predictors in perioperative and long-term outcome to see how far the age limit might be pushed and which indicators might be of relevance for stroke free survival.

Methods

At the Medical University of Graz, all asymptomatic octogenarian patients who underwent surgery for internal carotid endarterectomy between 1/2011 and 1/2021 were included. They were followed to determine long-term survival and stroke rate. 'Perioperative' was defined as 30 days following surgery. Stroke-free survival was determined with SPSS using the Kaplan-Meier method. The influence of a multitude of factors on stroke-free-survival was calculated with cox-regression.

Results

There were 122 males and 92 females (n = 214), mean age was 82.8 years. There were no perioperative strokes, but one perioperative death (5 days after discharge) putting the perioperative stroke and death rate at 0.5%. Zero patients were lost to follow up. Mean stroke free survival was 6.32 years (CI 5.84 – 6.80 years). During follow-up six patients experienced a minor ipsilateral stroke (max. Rankin 2). The following factors showed a significant impact on stroke free survival: ASA-classification (p = 0.001, ASA 1-3: 7.1 years, ASA 4: 5.4 years), gender (p=0.03, female: 6.93years vs. male: 5.83 years), surgical revascularization of the lower extremity (p=0.04), diabetes (p=0.036) and age (p=0.03).

Conclusion

This data show results within a select group of patients who were deemed suitable for surgery after carful individual assessment at initial presentation. The analysis clearly shows that carotid endarterectomy in asymptomatic octogenarians can be performed with a low perioperative stroke- and death rate and good long-term outcome for men and women. Moreover, in contrast to widely shared opinion, our results in female patients show an advantage in stroke free survival over male patients. (Fig. 1) Further research is being carried out to examine the adequate selection process. Collecting more data and determining specific risk factors in this particular subgroup of patients will enable us to improve the selection process for internal carotid endarterectomy in asymptomatic octogenarians.