COMPARISON OF CAROTID ARTERY STENTING IN PATIENTS WITH SINGLE VERSUS BILATERAL CAROTID ARTERY DISEASE AND FACTORS AFFECTING OUTCOME

i2 Poster Contributions
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Authors: Josef Veselka, Petra Zimolova, Lucie Martinkovicova, Miloslav Spacek, Jiri Fiedler, David Zemanek, Petr Hajek, Martin Maly, Pavol Tomasov, David Tesar, CardioVascular Center, University Hospital Motol, Prague, Czech Republic

Background: Carotid artery stenting (CAS) is a valuable therapeutic alternative to the carotid artery endarterectomy in surgically high-risk patients. The aim of this study was to evaluate mid-term clinical outcomes in patients undergoing a CAS and to compare the results in patients with an unilateral and a bilateral carotid artery disease.

Methods: A retrospective analysis of prospectively collected data was done. Between January 2006 and January 2010, 273 consecutive patients (69±8 years, 60% males, 31% symptomatic, 86% at a high-risk for surgery) were treated. Subsequently, the patients were examined at least at 30-day and mostly also at one-year follow-up, respectively.

Results: A total of 350 stents in 342 procedures were implanted. An acute lesion success (attainment of a final residual stenosis <30%) was seen in 340 procedures (99%). The incidence of periprocedural transient ischemic attacks (TIA) differed significantly (8% vs 1%; p=0.01) among patients with and without a bilateral internal carotid disease, and subsequently a tendency to a lower occurrence of early adverse events (death, stroke, periprocedural TIA, periprocedural myocardial infarction) was showed (11% vs 5%; p=0.12). At a one-year follow-up, there was a high incidence of adverse events (death, stroke, periprocedural TIA, periprocedural myocardial infarction, restenosis) in patients with a bilateral carotid artery disease (40% vs 14%; p<0.01), which was mainly driven by a higher incidence of death, periprocedural TIA and restenosis (p≤0.02 for all). According to the multivariate analysis, the independent predictors of the adverse events were the left ventricular dysfunction, male gender, bilateral carotid artery disease, renal insufficiency, cerebral symptoms within the last six months prior to the intervention, and LDL-cholesterol level.

Conclusions: In this single-center study, CAS was technically feasible, clinically safe, and associated with a low rate of major periprocedural events. In mid-term follow-up, the patients with a bilateral carotid artery disease have significantly more adverse events than the patients with an unilateral disease.