Surgical therapy of extracranial carotid artery aneurysms: long-term results over a 24-year period.

BACKGROUND: To evaluate long-term results of surgical therapy of extracranial carotid artery aneurysms (ECCA) and to provide a morphologic classification for individual surgical reconstruction techniques. PATIENT AND METHODS: This retrospective analysis includes 57 patients (43 male, mean age 61.9 years.) with 64 carotid reconstructions for ECCA between 1980 and 2004. In 29 (50.9%) of the patients there was found a cerebral ischemic event as an initial symptom (18 transient ischemic attacks, 11 strokes). In patients without cerebral events, the presenting symptom was pulsatile cervical mass in 19 and cranial nerve dysfunction in 3 cases. ECCA was morphologically stratified in Type I=isolated aneurysms of the internal carotid artery (n=25), Type II=aneurysms of the complete internal carotid artery with involvement of the bifurcation (n=8), Type III=aneurysms of the carotid bifurcation (n=20), Type IV=combined aneurysm of the internal and common carotid artery (n=5) and Type V=isolated aneurysm of the common carotid artery (n=6).

RESULTS: Perioperative stroke rate was 1.6%. 4 patients suffered from transient ischemic attacks (6.3%). Permanent and transient cranial nerve injury rate was 6.3% and 20.3% respectively. After 5, 10, 15 and 20 years the actuarial survival was 90%, 77%, 65% and 57%. The ipsilateral stroke-free time was 96%, 96%, 93%...
and 87%, respectively. CONCLUSIONS: Surgical reconstruction of extracranial carotid aneurysms is a safe procedure with good long-term results. The risk of a permanent, perioperative cerebral neurological deficit is low, but there is a considerable risk of cranial nerve injury.