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Objectives: Carotid revascularization is routinely performed for patients with severe carotid stenoses. Although neurologic complication is uncommon, decline in cognition following interventions, particularly memory, has been reported. However, there is inconsistency in cognitive evaluations and one methodological difficulty in assessing memory changes is that identical tests are applied so that practice effects may improve performance and obscure underlying decline. The aim of this study is to assess memory change using parallel forms with different stimuli in which the actual information is not repeated across sessions.

Methods: Twenty six patients underwent MRI evaluations and neuropsychological assessments before and after carotid revascularization procedures. Neuropsychological battery included measures assessing general function (MMSE), depression, attending/executive function/psychomotor speed, and memory. Memory was measured using parallel forms of Rey Auditory Verbal Learning Test (RAVLT) and the critical measure was the difference in performance on the delayed recall sub-measure of RAVLT, which involved repeating the word list after a 20-minute delay.

Results: A total of 26 patients (20 CEA and 6 CAS) with a mean age of 72 years (Range=60-86) were evaluated. The average education was 12.9 years (Range=10-18), and average MMSE 27.8 (range=22-30). Four patients had procedure-related microemboli including 2 CAS patients. There was a subtle, but significant decline in the delayed recall following interventions ($t(25)=2.32$, $p=0.029$). Among 14 patients (53.8%) who declined, three had CAS procedures. Patients who had preoperative neurologic symptoms had a tendency of postoperative memory decline.

Conclusions: Memory function deterioration following carotid interventions is a major concern. Patients should be counseled about potential delayed memory decline. Further studies investigating clinical risk factors for these changes are warranted.

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PS78.

Stroke in Evolution and Crescendo TIA in Carotid Disease: The Need for Emergency Surgical Treatment According to a Predefined Protocol

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Objectives: to examine the safety of emergency CEA in patients with carotid disease and unstable neurological symptoms

Methods: This prospective observational single-center study involved patients with stroke in evolution or fluctuating stroke (SIE) or crescendo TIA (cTIA) related to a carotid stenosis $\geq 50\%$ who underwent emergency surgery. Preoperative workup included National Institute of Health Stroke Scale (NIHSS) neurological assessment on admission, immediately before surgery and at discharge, carotid duplex scan, brain contrast-enhanced head computed tomography or magnetic resonance imaging. Endpoints were: perioperative (30-day) neurological mortality, NIHSS score variation, hemorrhagic or ischemic stroke recurrence. Patients were evaluated according to clinical presentation (SIE or cTIA), timing of surgery, presence of brain infarction on neuroimaging.

Results: between January 2005 and December 2009 forty-eight patients were submitted to emergency surgery. CEAs were performed from 1 to 24 hours from onset of symptoms (mean 10.16 ± 7.75). Twenty-six patients presented a SIE with a worsening NIHSS score between admission and surgery, and 22 presented ≥ 3 crescendo TIAs with a normal NIHSS score (=0) immediately before surgery. An ischemic brain lesion was detected in 25% of them. All cTIA patients presented a persistent NIHSS normal score before and after surgery. Twenty-five SIE patients presented an NIHSS score improvement after surgery. Mean NIHSS score was 5.30 ± 2.81 before surgery and 0.54 ± 0.77 at discharge in the SIE group ($p < 0.0001$). 1 SIE patient had an hemorrhagic transformation of an undetected brain ischemic lesion after surgery, with progressive neurological deterioration and exitus (2%).

Conclusions: Due to the absence of RCT of carotid endarterectomy (CEA) for neurologically unstable patients, data currently available do not support a policy of emergency CEA in those patients. Our results suggest that a strict protocol could help identify those unstable patients that can be safely submitted to emergency CEA.

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PS80.

Safety and Effectiveness of Carotid Endarterectomy in Octogenarians

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Objectives: To evaluate results of carotid endarterectomy (CEA) in elderly patients (>79 yrs.) in a large single center experience.