

Conclusions: During the study period, utilization of CAS & CEA was highest in NHC. There was a trend toward increased CAS utilization over time among NHC and OG, and a trend toward increased CEA utilization among H and AA.

TCT-508

Transcatheter Treatment of Patients after Extensive Ischemic Stroke

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Background: The research investigates the possibility of reducing cognitive disorders and restoring activities of daily living in patients after extensive ischemic stroke using transcatheter cerebral revascularization.

Methods: 92 patients aged 32-72 having undergone extensive ischemic stroke spreading to different parts of the brain were examined. The patients underwent: Index Bartels (IB), CT, brain MRI, scintigraphy (SG), rheoencephalography (REG), MUGA. 68 patients underwent transcatheter treatment - Test Group. 24 patients underwent conservative treatment - Control Group. High-energy pulsed laser systems were used for revascularization of the major intracranial arteries; low-energy continuous laser systems were used for revascularization of the distal intracranial branches.

Results: Test Group. 66 (95.59%) patients had a good immediate angiographic outcome manifested in the restoration of lumen and patency of the affected vessels as well as in collateral revascularization. 12-24 months later the following positive dynamics was observed: good clinical outcome (almost complete intellectual abilities and motor functions restoration - IB90-100) - 14 (20.59%) patients; satisfactory clinical outcome (incomplete intellectual abilities and motor functions restoration - IB75-85) - 30 (44.12%) patients; relatively satisfactory clinical outcome (partial intellectual abilities and motor functions restoration - IB60-70) - 24 (35.29%) patients; relatively positive clinical outcome (absence of negative dynamics with insignificant restoration of motor functions - IB<60) was not obtained in any case. Control Group. 12-24 months later the following dynamics was observed: good clinical outcome was not obtained in any case; satisfactory clinical outcome was not obtained in any case; relatively satisfactory clinical outcome - 4 (16.67%) cases; relatively positive clinical outcome - 20 (83.33%) cases.

Conclusions: In the treatment of extensive ischemic stroke effects, transcatheter cerebral revascularization is a more effective method than the therapeutic one. It can significantly reduce the level of cognitive impairment and return patients to active daily life.

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Impact On Outcome Of Different Types Of Carotid Stents: Results From The European Registry Of Carotid Artery Stenting.

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Background: At present few data exist on the impact on outcome of the use of different carotid stent types during neuroprotected carotid artery stenting (CAS). Aim of this study was to evaluate the outcomes associated with neuroprotected CAS in selected high volume centers according to different carotid stent design.

Methods: From January 2007 to December 2007, 1611 patients underwent neuroprotected CAS in eight European Centers (ERCAS registry). An independent clinical events committee adjudicated the events. All types of commercially available carotid stents were used (closed, open and hybrid cell designed). Open cell designed stent were classified according to cell free area (< 7.5 mm² or >7.5 mm²).

Results: 728 closed-cell, 456 hybrid-cell, 234 <7.5 mm² open-cell, and 193 >7.5 mm² open-cell stents were implanted. At 30-days 18 strokes occurred (1.12%; 7 (0.96%) in those treated with a closed-cell, 2 (0.44%) in those with a hybrid-cell, 3 (1.28%) in those with a <7.5 mm² open-cell, and 6 (3.10%) in those treated with a >7.5 mm² open-cell stent, p=0.029). Overall 30 days stroke and death rate was 1.36%, and no statistically significant difference was observed among the groups.

Conclusions: CAS is a reasonable alternative to carotid endarterectomy as it is associated with excellent outcomes when performed in well-experienced high volume centers. Data of the present study suggest that the use of open cell designed stent with free cell area >7.5 mm² is associated with an increased 30 days stroke risk. However, future randomized trials are needed to confirm this finding.

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Bovine arch vs aortic arch type III. The importance of the type of complex aortic arch in carotid stenting.

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Background: Some descriptions had shown increased risk for neurological complications in the case of aortic arch anomalies, bovine arch frequency was 10.2%, technical failure 12% and complications in 20% of patients. The aim is to compare the frequency of adverse events in type III arch patients with bovine arch patients in complex aortic arch (CAA) carotid artery stenting.

Methods: 407 carotid angioplasties with stenting were done. The patients were divided into two groups: CAA (group 1: 114 patients) and control group (group 2: 293 patients). Patients in the CAA were divided into type III arch (group 3: 48 patients) and bovine arch (group 4: 66 patients). The endpoints were the composite of major cardiovascular adverse events (death, major stroke and myocardial infarction), major stroke, transitory ischemic attack (TIA) and the composite of contrast medium nephropathy, haemoglobin dropping more than 2 grs within 24 hours after procedure or complications related to puncture site such as haematoma, pseudoaneurysm or arterio venous fistula, called "other adverse events".

Results: The rate of TIA was a little higher in the CAA group 2.63% (p=0.022), compared with control, because of the higher rate in the type III group (4.1% p=0.003). For the endpoint "other adverse events" there were more events in the CAA group (12 patients 10.52% p=0.022), but this depends on a significantly higher frequency of events in the type III group (8 patients 16.6% of the type III p=0.001). At 30 days follow up there were increases in the frequency of major stroke and TIA in the CAA group (4.3% and 2.63% of group 1, p=0.023 and 0.022). These events were more frequent in group 3 (type III) 4.16% for both endpoints p=0.108 for major stroke and 0.038 for TIA.

Conclusions: There were significantly more periprocedural adverse events in the CAA group in the endpoint of "other adverse events" and TIA. In these two cases, most events were in the type III aortic arch group. The aortic arch type III seems to be responsible for most adverse events in the carotid stenting of the CAA anatomy.