**808-2**

**Endovascular Treatment of Atherosclerotic Stenosis of the Internal Carotid Artery**

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**Purpose:** To study endovascular treatment (angioplasty-stents) of atherosclerotic stenoses of internal carotid artery to determine if it may partially replace surgical endarterectomy, to evaluate benefits of angioplasty under cerebral protection.

**Method and Materials:** 131 internal carotid arteries with 72% stenosis treated in 124 pts (M/F 73%: 66 yrs: range 47-93). Mean lesion length: 15 ± 1.4 mm. Mean arterial diameter 5.8 mm. 66% of the pts had contralateral carotid thrombosis. 40% of the pts were symptomatic. 60% asymptomatic (65% had severe coronary diseases, 40% peripheral vascular diseases). Predilation of the stenoses always performed before stenting. Stents deployed in all carotids but 1: Palmaz stents (n = 55); Wallstent (n = 33). Stent size was matched (n = 1). 104 carotid art treated without cerebral protection (pres: 69 direct puncture, 13 brachial approach). 27 carotids treated with cerebral protection (triple carotid catheter) via femoral approach. Pts had neurological examination, CT scan, echocardiography, and angiography before and after procedure and at 6 months.

**Results:** Immediate technical success for stenoses 100%. Mean % stenoses reduced from 85.1 ± 7.8 to 2 ± 1.6. Neurological complications (7.4%). Without cerebral protection 3 TAs, 1 minor stroke. Major stroke (hemiplegia), with protection 2 major strokes (1 amaurosis, 1 hemiplegia). 3 access site hematomas. No death. 90 pts were controlled at 6 months. We observed 1 mild compression of a Palmaz stent, 2 restenoses (4%), 1 silent thrombosis, 1 silent restenosis, 1 symptomatic restenosis (1%) treated by new angioplasty. 1 restenosis with migration of a Wallstent treated by new PTA. surgical endarterectomy.

**Conclusion:** Endovascular treatment seems safe, effective, and can be considered as an alternative to surgery for atherosclerotic stenoses. Cerebral protection has not reduced cerebral complications in this series.

**808-3**

**Relationship Between Oversizing of Self Expanding Stent and Late Loss Index in the Internal Carotid Artery**

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Stenting of the internal carotid artery (ICA) is facilitated by stenting across the carotid bifurcation and sizing the diameter of the self-expanding stent to the large common carotid segment. This usually results in marked oversizing of self-expanding stents deployed in the ICA does not appear to be associated with late restenosis.

<table>
<thead>
<tr>
<th>Stent/Aretery ratio</th>
<th>late loss index mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>0.16 ± 0.03</td>
</tr>
<tr>
<td>1.5</td>
<td>0.17 ± 0.05</td>
</tr>
<tr>
<td>1.6</td>
<td>0.23 ± 0.03</td>
</tr>
<tr>
<td>1.7</td>
<td>0.31 ± 0.06</td>
</tr>
<tr>
<td>1.8</td>
<td>0.47 ± 0.10</td>
</tr>
<tr>
<td>1.9</td>
<td>0.63 ± 0.15</td>
</tr>
<tr>
<td>2.0</td>
<td>0.90 ± 0.23</td>
</tr>
</tbody>
</table>

**Conclusion:** The extent of oversizing of self-expanding stents deployed in the ICA does not appear to be associated with late restenosis.

**808-4**

**Successful Bilateral Carotid Artery Stenting After Failed Carotid Endarterectomy**

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**Background:** As treatment for extra-cranial arterial disease, carotid artery stenting may be needed after failed carotid endarterectomy (CEA) in the relief of symptoms caused by unilateral or bilateral stenosis of the carotid artery. There have been no reports of the efficacy and safety of bilateral carotid artery stenting in this setting.

**Method:** Over the past year, we evaluated the results of bilateral carotid artery stent placement (Wallstent Schneiders) in 11 patients (6 males, 5 females, mean age 65 ± 9 years) who presented for treatment of symptomatic bilateral carotid artery stenosis after failed CEA. All 11 had coronary artery disease and symptoms if included transient ischemic attacks and reversible neurological deficit. Ten patients (90%) had other co-morbid conditions (i.e., COPD, peripheral vascular disease, renal fibrosis, chronic renal failure) and 8 (73%) had left ventricular dysfunction (EF = 40%).

**Results:** Bilateral carotid stenting was successful in all patients (reduction in stenosis from 50 to 5 to 3%). With minimal morbidity and no major neurological complications. Post-procedure, two patients (18%) developed groin hematomas that needed surgical repair. On follow-up (8 ± 2 months), we found no neurological events and no deaths. Ultrasound duplex scan at 6 months showed no restenoses or stent deformity.

**Conclusion:** Carotid artery stenting merits consideration as the procedure of choice for relief of symptomatic unilateral or bilateral carotid artery stenoses after failed CEA. To date (6 months followup), no patient has any restenoses. The long-term efficacy of the procedure in this setting needs further study.

**808-5**

**Carotid Stenting in Patients at Risk for Surgery: Immediate and Long-term Results**


**Purpose:** To study the risks and benefits of endovascular treatment of stenoses of the carotid arteries in selected patients at risk for endarterectomy.

**Methods:** From 5/4/05 to 7/20/07, we performed carotid artery stenting on 87 lesions (pts) in 75 patients (pts) (68 males, mean age 70 ± 2 years, range: 61-88), considered at risk for surgical endarterectomy due to concomitant co-morbid illnesses as severe coronary artery disease in 46 pts (62%), and an additional 23 pts (31%) with aneurysmal lesions involving difficult surgical access in 23 pts (39%). Thirty four patients (45%) had neurological symptoms, including transient ischemic attacks in 25 pts and recent stroke (9 pts). The remaining pts were asymptomatic.

**Results:** Immediate technical success: 98%. Procedural success was achieved in 70/76 pts (93%). Immediate complications consisted of 4 strokes (5%)] and 3 arterial complications as severe coronary artery disease in 46 pts (60%) or severe vasa vasorum in 23 pts (39%). Forty three pts (45%) had neurological symptoms, including transient ischemic attacks in 7 pts and recent stroke (9 pts). The remaining pts were asymptomatic.

**Conclusion:** Carotid endarterectomy is an acceptable therapeutic option to surgical endarterectomy in some selected patients at risk for surgery.

**808-6**

**Subclavian and Innominate Arteries Stenting: Acute and Long Term Results**

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To evaluate the safety and efficacy of endovascular stenting for treating subclavian (n = 31) and innominate (n = 4) artery stenosis, we reviewed our results in 35 pts (mean age 62 ± 9 yrs, male = 16) who underwent stenting with Palmaz stent (n = 43) and Wallstent (n = 1). Indications for stenting included arm claudication (n = 21), subclavian steal (n = 10), and compromised ipsilateral or contralateral arm flow (n = 4). Nineteen lesions were ostial (n = 15), proximal (n = 23) and distal (n = 2). All pts received antithrombotic therapy while 25% received additional oral warfarin. Procedural success was defined as abolition of pressure gradient across the aorta and the subclavian artery and a residual diameter stenosis ≤20% without major complications (acute stent thrombosis, myocardial infarction, embolization, emergency surgery or death).

**Results:** Procedural success was achieved in all 35 (100%) pts and all pts had symptomatic relief acutely. None of the pts had any major complications (see table).

**808-7**

**Microvascular Stenting of the Femoral Artery: Short and Long Term Results**

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**Purpose:** To evaluate the safety and efficacy of femoral intervention in the treatment of critical limb ischemia. We evaluated 90 femoral arteries in 60 pts treated with the Wallstent (n = 51) and angioplasty (n = 39).

**Methods:** 90 femoral arteries in 60 pts (mean age: 65 ± 15 yrs, male = 29, female = 31) with femoral artery stenosis (n = 81) or occlusion (n = 9). All pts underwent femoral intervention with Wallstent (n = 51) or angioplasty (n = 39). Pts received additional oral warfarin. Procedural success was defined as a favorable outcome at a single follow-up visit after the procedure (n = 1) and freedom from repeat intervention was defined as no reintervention after the initial procedure (n = 1).

**Results:** Procedural success was achieved in all 90 (100%) femoral arteries. Freedom from reintervention was 90% (n = 1) at 6 months and 80% (n = 1) at 1 year.