POSTER SESSION

1006 Peripheral Vascular Disease Interventions

Sunday, March 17, 2002, 9:00 a.m.-11:00 a.m.
Georgia World Congress Center, Hall G
Presentation Hour: 9:00 a.m.-10:00 a.m.

1006-1 Percutaneous Left Atrial Appendage Transcatheter Occlusion (PLAATO) to Prevent Stroke in Patients With Atrial Fibrillation: First Human Experience

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Background: Warfarin is effective in reducing stroke in those patients with atrial fibrillation. However, it has a narrow therapeutic range and is contraindicated in many. The left atrial appendage (LAA) is the source of thrombi in > 90%. Obliteration of the LAA may preventive cardioembolic complications. We report the 1st human experience with percutaneous left atrial appendage transcatheter occlusion (PLAATO).
Patients: PLAATO was attempted in 4 pts (66 - 74 yrs) with atrial fibrillation, additional stroke risk factors, and contraindication to warfarin.
Methods: PLAATO™ system consists of a self-expanding cage covered with ePTFE delivered through a 12Fr transseptal sheath specially designed to access the LAA. Animal studies have shown efficacy at sealing the LAA with complete encapsulation and endothelialization by 1 - 3 mos. The implant has not served as the nidus for new thrombus. Angiography is used to determine the initial device diameter. However, one can collapse the implant and either reposition or remove and replace with a different size.
Results: The 1st pt had complex LAA anatomy and the procedure was abandoned due to perforation during catheter manipulation, and without implantation. Pericardiocentesis was performed without sequelae. In the others, the procedure was successful in occluding the LAA. Devices with dia. of 18, 23 & 32 mm were ultimately implanted without complications. There were 4 successful retrievals to change implant size. Transesophageal echocardiography showed the device well seated. Follow up x-rays and echocardiograms revealed stable implants.
Conclusions: (1) Transcatheter closure of the LAA is feasible; (2) a novel technology may offer an option for pts with AF who are not candidates for anticoagulation; (3) a clinical trial is needed to show the long term safety and efficacy in reducing stroke.

1006-21 Percutaneous Intervention For Occlusive Subclavian Artery Disease

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BACKGROUND: Subclavian artery disease has varied clinical manifestations. The traditional management for symptomatic subclavian stenosis or occlusion has been surgical revascularization. More recently, percutaneous transluminal angioplasty with subsequent stent placement has gained prominence as an alternative treatment to surgery. However, there is limited data on procedural and follow up outcomes.
METHODS AND RESULTS: We retrospectively analyzed our peripheral endovascular records from April 1992 to March 2001. The records of 89 patients (40 males: mean age 62.2 years, range 40-81years) were reviewed. Nine of the intervened upon subclavian arteries were occluded. A total number of 106 stents were placed. Primary stent deployment was successful in 105 (99.1%) interventions. The 3 most common indications for intervention included patency of inflow to the left internal mammary artery pre- or post-coronary artery bypass surgery 30 (33.7%), arm claudication 21 (23.6%) and subclavian steal syndrome 17 (19.1%). Procedural complications occurred in 13 (14.6%) cases (pseudoaneurysms/hematomas in 5; non-flow limiting dissections in 4; digital atheroemboli in 1; brachial artery injury requiring surgical repair in 1; stent maldeployment in 2). There were no major complications (death, MI, CVA).
Follow up consisted of clinical exam, blood pressure measurement in both arms, arterial duplex examinations or pulse volume recordings. Follow up records was available for 66 patients. This included 27 patients who were followed for a period between 12 and 54 months after the initial intervention. Clinical evidence of restenosis occurred in 8 (8.9%) patients. In 1 of these patients, surgical intervention at 2 months was required. Two other patients underwent repeat stenting 23 and 21 months after their initial procedure.
CONCLUSIONS: Percutaneous angioplasty and stenting of the subclavian artery is safe and effective. Excellent procedural outcomes as well as short and mid term patency results make it a reasonable alternative to surgical bypass procedures, however there is still need for investigation into long-term patency rates.

1006-22 Renal Stenting Preserves Single Kidney GFR Compared to Medical Therapy in Patients With Renal Artery Stenosis: Fourteen-Month Follow-Up

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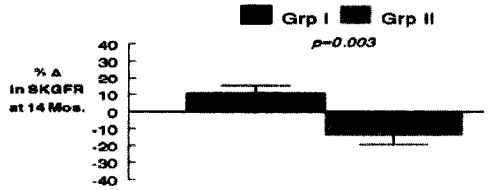
Background: Studies of renal stenting (RS) for preservation of renal function have yielded conflicting results, which may be related to the use of serum creatinine as the sole measure of renal function. Renal scintigraphy with Iothalamate and Tc-DTPA provide a more accurate measure of total and single kidney GFR (SK-GFR). We determined the effect of RS on SK-GFR compared to medical therapy in pts with renal artery stenosis (RAS). **Methods:** We prospectively followed 41 pts with confirmed RAS. Total and SK-GFR were measured in each patient at baseline and at 14 ± 6 months of follow-up. Thirteen Pts underwent RS (Grp I), while 28 pts were treated medically, (Grp II).
Results: Baseline total and SK-GFR did not differ between the two groups. Follow-up scintigraphy demonstrated a mild reduction in total GFR in both groups (0.3% vs 6%, in Grp I vs. II respectively, p=NS). In contrast, SK-GFR improved in the stenotic kidney in Grp I pts, whereas it decreased in Grp II pts, (2.1 ± 1.4 vs -4.9 ± 1.2 ml/min/1.73m^2, p=0.0024). The % change in SK-GFR at 14-months is shown below (Grp I increased by 11 ± 4% vs. Grp II decreased by 14 ± 5%, p=0.003).
Conclusions: RS preserves SK-GFR in pts with RAS, whereas progressive deterioration is observed in medically treated pts. Our findings suggest that RS should be considered in pts with RAS to preserve renal function.



1006-23 Interventional Treatment of Different Localization of Inflammatory Vasculitis: Takayasu's Arteritis

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Background: Although the initial reports demonstrated high procedural success rate of balloon PTA in patients with Takayasu's arteritis the suboptimal results and restenosis will be the main limitations of balloon PTA. Stenting has some benefits for elastic recoil of the fibrotic vessels and restenosis as in other large vessels in Takayasu's arteritis or atherosclerosis. Methods: We report the procedural outcomes of stenting and/or cutting balloon angioplasty for the stenosis of different localization of Takayasu's arteritis underwent PTA with stents, and cutting balloon angioplasty and rotational atherectomy with stents for the hard fibrotic stenosis in carotid, vertebral, innominate, subclavian, renal, aorta, and coronary arteries. Results: Among the 14 patients there were 12 female and 2 male with a mean age of 36(17-68)years. Carotid stenting was performed in five patients, vertebral angioplasty and stenting in three patients, subclavian angioplasty and stenting in two patients, innominate stenting in one patient, renal angioplasty and stenting in three patients, aortic angioplasty and stenting in two patients and coronary stenting in four patients including two aorto-left main ostial, two left anterior descending, two right coronary and one left circumflex lesion(s). Patients who were diagnosed to have an active phase of the disease received steroid, aspirin and ticlopidine for stenting prior to procedure. The procedural success was achieved in all patients. During the follow up revascularization was performed in 20% for carotid, 33% for renal, 70% for coronary artery stenosis.
Conclusions: PTA with stent implatation is a safe and feasible revascularization strategy for relief of stenotic in patients with Takayasu's arteritis. However relatively small artery stenting such as coronary artery revealed high rate of restenosis necessitating the repeat revasculqarization.

1006-24 Emergent IABP Insertion in Patients With Severe Aortoiliac Disease and Acute Coronary Syndrome: Role of Bilateral Iliac PTA +/- Stenting Preceding IABP

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Background: Severe bilateral aortoiliac occlusive disease (BAIOD) has been considered a contraindication for intraaortic balloon pump (IABP) insertion due to the high risk of vascular complications. We report 52 patients with BAIOD presenting with acute coronary syndrome (ACS) and cardiogenic shock (systolic BP <90 mm Hg) and a strategy of urgent coronary and peripheral angiography, bilateral iliac artery percutaneous transluminal angioplasty (PTA) +/- stenting, and immediate IABP insertion was used.
Methods: Of 1004 IABPs placed between 1993-2000, 52 cases presented with simultaneous BAIOD, ACS, and cardiogenic shock requiring emergent IABP insertion for hemodynamic stabilization and coronary revascularization. Definitive cardiac treatment required 34 PTCAs and 18 CABGs. All 52 patients required bilateral iliac artery intervention [47/52 (90%) PTA/stent, 5/52 (9.6%) PTA], successful IABP insertion, and definitive coronary revascularization. Iliac interventions required <70cc contrast and no iliac interventions required >25 min.
Results: 49/52 (94%) no vascular complications, 1/52 (1.9%) simple surgical embolectomy, and 2/52 (3.8%) had minor hematomas. 30 day mortality 7/52 (13%); 24-month mortality- 12/52 (23%). Overall mean follow up of 36 months, 3/5 patients treated with iliac PTA alone required PTA/stenting and 5/47 (10.6%) originally treated with PTA/stent required additional PTA/stenting.
Conclusion: In patients presenting with simultaneous BAIOD and ACS, iliac PTA +/- stenting is feasible, allows urgent IABP insertion for hemodynamic stabilization and definitive cardiac treatment and is a compelling reason for cardiologists to acquire skills in treating both CAD and PVD. BAIOD should not be considered an absolute contraindication for IABP insertion.