Diabetes Mellitus and Long-Term Impact on Renal Function In Patients With Renal Artery Stenosis and Continued Percutaneous Transluminal Renal Angioplasty and Stent Placement

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Background: Renal function has been shown to stabilize or improve after percutaneous transluminal renal artery angioplasty (PTA) with stent placement in some patients with renal artery stenosis (RAS). We undertake this study to see if diabetes mellitus (DM) influences this observed benefit.

Methods: From 7/1997 to 7/2002, 96 PTA's with stents were performed for athrosclerotic RAS in 80 patients. Charts of these patients were reviewed retrospectively. Clinical and angiographic follow-up with a mean of 17.6 ± 13.5 months was obtained.

Results: Baseline, 29 of 90 patients (32%) presented with DM. Serum creatinine (Cr) prior to intervention for the entire cohort was 1.50 ± 0.59 mg/dl. Patients with DM had a higher mean Cr at baseline compared to patients with no DM (1.74 ± 0.50 vs. 1.07 ± 0.50, respectively; P = 0.009). During the follow-up period, diabetics had increasing Cr levels with values of 1.85 ± 0.57, 1.99 ± 0.99, 2.05 ± 1.06 and 2.03 ± 0.71 mg/dl at 1 month, 6 months, 1 year and 2 years, respectively. In contrast, non-diabetics had a decreasing trend in Cr, with levels of 1.38 ± 0.56, 1.33 ± 0.60, 1.22 ± 0.30 and 1.16 ± 0.40 mg/dl. At 6 months patients with diabetes had a higher Cr (P = 0.04) when compared to baseline.

Conclusions: In patients who present with RAS and proceed to PTA with stent placement, those without DM had a strong trend toward stabilization and improvement in serum Cr over time. In contrast, the patients with DM had worsening of renal function over time, a finding which becomes significant at two years.

Transluminal Endovascular Graft Placement With INOUE Stent Graft Is Effective for Many Types of Aneurysms and Dissections

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Background: Although endoluminal stent graft placement has evolved as a potential alternative to open surgical repair, current technologies have limitations in managing severe bend or side branches of the lesions. The feasibility and efficacy of Transluminal Endovascular Graft Placement (TEGP) with INOUE stent graft for treatment of many types of aneurysms and dissections was investigated. Methods: From Aug, 1997 to August 2002, we performed TEGP with INOUE stent graft in 107 patients (78 pts) and 107 cases (80 men and 23 women, mean age 73 years). Forty seven pts were very high risk for open repair or good candidates for TEGP. The cases consist of 1 ascending, 22 thoracic, 16 dissecting, 9 retro-abdominal, 54 infra-abdominal aortic aneurysms and 1 common iliac artery aneurysm. Twenty of the cases had straight, 20 had single branched, 5 had dual branched, 8 had triple branched and 58 had bifurcated graft. Result: In all cases but one, stent grafts were implanted successfully to the intended sites. There were five early deaths because of shower embolism, cerebral infarction and MRSA pneumonia in thrombus-rich aneurysm cases. The other major complications were stroke, supraspinal embolism and transient post-splanchnic artery syndrome. In dissecting cases, there were no embolic events. The mean follow-up was 27 months (range, 1-60 months). Follow-up studies demonstrated 11 endoleaks. Six types III endoleaks were caused by problem stent grafts. Conclusion: TEGP with INOUE stent graft is less invasive and especially useful for high risk pts. Inoue stent can be used in many types of aneurysms and dissecting involving major branches of aortic arch or having severe bending. This advantage is due to its high flexibility and side branch availability.

Penetrating Aortic Ulcer Treatment by Endovascular Stent-Graft Placement

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Background: Penetrating atherosclerotic ulcer (PAU) class 4 aortic dissection of the aorta is infrequently recognized in patients with atherosclerotic aortic syndromes. Given the high morbidity and mortality, endovascular stent-graft repair may be an attractive treatment alternative in selected patients.

Patients and Methods: We prospectively evaluated safety and efficacy of endovascular stent-graft placement in 6 patients with PAU of the aorta. Eight (95%) patients presented with acute aortic syndrome. Two patients had contained aortic rupture with left hemotorax. With the patients under general anestheisia, stent-graft placement was performed using a transluminal approach.

Results: Endovascular stent-graft placement was technically successful in all patients (mean stent diameter 34.7 mm [24-46 mm], mean length 90.17 mm [60-130 mm]. In one patient with PAU in the aortic arch, occlusion of the left subclavian artery was induced by the stent graft, but remained asymptomatic. All patients developed transient elevation of C-reactive protein levels (13.2±5.0 mg/dl) and mild leukocytosis (11.3±3.6/μl) after the intervention. There were no neurological complications or deaths during the in-hospital period. Within a follow-up period of 15.4±2 months, there was one endoleak which was successfully treated by additional stent-graft implantation. In one patient with indication for surgical revascularization of preexisting bilateral renal artery stenosis the patent stent-graft was explanted and the diseased aortic segment replaced by surgical bypass.

Conclusion: PAU is a rare but serious acute disease of the aorta with a high rate of bleeding complications. Our experience suggests that endovascular stent-graft placement is a safe and effective therapeutic option.
Background: Common femoral artery (CFA) atherosclerotic lesions are traditionally treated surgically. We report our initial experience of percutaneous intervention (PTA) for CFA disease.

Methods: From January 1998 to December 2001, 47 patients (53 limbs) underwent PTA of CFA lesions. Angiographic (final diameter stenosis < 30%) and clinical success, procedural and clinical complications were noted for all the patients. Primary and secondary patency were determined using Duplex ultrasound or ankle-brachial index (ABI) criteria and were measured at 6 months and one year.

Results: Procedure indication was Rutherford category 2-3 moderate-to-severe claudication (70.2%), category 4 rest pain (8.5%), category 5-6 tissue loss (19.3%) and salvage of aortic-iliac artery disease (2%). Most patients had ipsilateral iliac disease (70%) and 38% had prior peripheral surgical revascularization. Angiographic success was achieved in 100% of patients and pre-diameter stenosis 77.4 +/- 14.9% was reduced to 22.4 +/- 10.1%. Procedural complications included distal embolization (1.9%), and major hematomas (3.8%, all managed conservatively). None of the patients underwent emergency surgery or had procedure-related limb-loss. Pre-procedural ABI (0.61 + 0.19) improved at 6 month (0.70 +/- 0.16, p = 0.02) and one year (0.72 +/- 0.27, p = 0.06). Clinical symptoms improvement was moderate-to-marked (+2 to +3 scale) in 64%, and minimal (+1 scale) in 15% of the patients. Primary and secondary patency rates were 97%, 97% at six-month, and 91%, 92% at one year, respectively.

Conclusion: Early experience shows that CFA disease treatment with PTA is feasible with high success rates and low complications. This is supported by the improved ABI and clinical symptoms. Positive results have led to a large number of patients being treated by experienced operators.

Common Femoral Artery Percutaneous Intervention: Feasibility, Safety, and Clinical Outcomes

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Background: Common femoral artery (CFA) atherosclerotic lesions are traditionally treated surgically. We report our initial experience of percutaneous intervention (PTA) for CFA disease.

Methods: From January 1998 to December 2001, 47 patients (53 limbs) underwent PTA of CFA lesions. Angiographic (final diameter stenosis < 30%) and clinical success, procedural and clinical complications were noted for all the patients. Primary and secondary patency were determined using Duplex ultrasound or ankle-brachial index (ABI) criteria and were measured at 6 months and one year.

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Percutaneous Intervention of Common Femoral Artery for the Treatment of Limb Ischemia

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Background: Significant atherosclerotic disease of the common femoral artery (CFA) often results in limb-threatening disease. Reports of percutaneous intervention of this vessel are scarce in the literature.

Methods: Percutaneous angioplasty (PTA) (n=11; 52%) with provisional stenting (n=9; 41.9%) were performed in 20 vessels. The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%).

Results: Procedural success was 98% overall, and was not influenced by the number of vessels treated. The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%). The indication for the procedure was Rutherford category 2-3 moderate-to-severe claudication in 19 patients (91.5%), category 4 rest pain in 1 patient (5.2%), category 5-6 tissue loss in 1 patient (4.8%).

Conclusion: Early experience shows that CFA disease treatment with PTA is feasible with high success rates and low complications. This is supported by the improved ABI and clinical symptoms. Positive results have led to a large number of patients being treated by experienced operators.

ABSTRACTS - Angiography & Interventional Cardiology

ORAL CONTRIBUTIONS

867 Percutaneous Coronary Intervention and Optimal Pharmacology

Wednesday, April 02, 2003, 8:30 a.m.-10:00 a.m.
McCormick Place, Grand Ballroom S100 BC

867-1 Correlation Between Statin Therapy Before Percutaneous Coronary Intervention, Periprocedural Creatine Kinase-MB Release, and Mortality at Follow-Up

Annapoorna S. Kini, Paul Lee, Cristina A. Mitre, Ajay Agarwal, Shazia Mukaddam, Mohoel C. Kim, Eunm K. Sharma, The Mount Sinai Medical Center, New York, NY, The University of Toronto, Toronto, ON, Canada

Background: Statin therapy has been shown to reduce mortality in patients with coronary artery disease. However, the effect of statin therapy before percutaneous coronary intervention (PCI) on acute and long-term outcome after PCI has not been well established.

Methods: We analyzed 4660 PCI patients for in-hospital events and 1-year mortality and compared the results between patients receiving statin therapy (PS, n=3270, 63.7%) and no-statin therapy (NS, n=1390, 36.3%) prior to PCI. All patients had CK-MB and Troponin measured at baseline and 1-2 hrs after PCI. All PS patients continued statins after PCI.

Results: Any CK-MB elevation was 15.4% versus 14.4% (p=0.37) in NS versus PS group. Troponin release, procedural complications, and clinical success rates were similar in the 2 groups. At follow-up, pre-statin therapy was an independent predictor of mortality (HR=0.65, 95% CI 0.45-0.92; p=0.0007) of survival (Figure). Other important baseline predictors of mortality were LV systolic dysfunction (HR=1.35), symptomatic heart failure (HR=1.42), and renal failure (HR=2.01). There was no difference in follow-up M or revascularization.

Conclusions: Statins have a beneficial effect on survival even in PCI patients. This survival benefit is mediated by other pleiotropic effects of statins and not by reduction of peri-procedural enzyme release or follow-up MI or revascularization.

867-2 Abciximab Readministration: Final Results of the Reopro® Readministration Registry

Jean-Pierre Dery, Gregory A. Braden, A. Michael Lincoff, Dean J. Kenetsteka, Kevin F. Brown, Thomas Littie, Barry S. George, Mark B. Effron, Mary Ann Mascelli, Mary Ann Lanzall, Lakshmi Damaraiu, Elliot S. Barnett, James E. Tcheng, Duke University Medical Center, Durham, NC

Background: Clinical outcomes of patients undergoing percutaneous coronary intervention can be improved by blocking platelet glycoprotein IIb/IIIa with abciximab (ReoPro®). Interim results of the Reopro Readministration Registry documented both efficacy and safety of abciximab readministration. The final results of this registry are presented.

Methods: A total of 1046 patients receiving abciximab for at least a second time were recruited from 24 centers in the United States. The safety endpoints assessed were the incidence of clinical complications or bleeding, but was associated with an increased inci-