Diabetes Mellitus and Long-Term Impact on Renal Function In Patients With Renal Artery Stenosis and 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 (PTRA) with stent placement in some patients with renal artery stenosis (RAS). We undertook this study to see if diabetes mellitus (DM) influences this observed trend.

Methods: From 7/1997 to 7/2002, 96 PTTRAs with stents were performed for atherosclerotic RAS in 80 patients. Charts of these patients were reviewed retrospectively. Clinical and angiographic follow-up with a mean of 17.6 ± 13.0 months was obtained.

Results: Baseline, 87 of 90 patients (97%) were DM positive, but 66% 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 without DM (1.24 ± 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 values of 1.38 ± 0.56, 1.33 ± 0.60, 1.22 ± 0.39 and 1.16 ± 0.40 mg/dL. At 2 years patients with diabetes had a higher Cr (P = 0.04) when compared to baseline.

Conclusions: In patients who present with RAS and proceed to PTAR with stent placement, those without DM had a strong trend towards 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 2 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 aneurysms and dissections. The purpose of this study was to evaluate the effectiveness and safety of the INOUE stent graft for treatment of many types of aneurysms and dissections.

Methods: From August 1997 to August 2002, we performed 107 TEVARs with INOUE stent grafts in 107 patients (70 males and 37 females, mean age 73 years). Forty-seven pts. were very high risk for open repair. TEVARs were performed for thoraco-abdominal (1199), thoraco-setBackground, 76A ABSTRACTS - Angiography & Interventional Cardiology

Endovascular Treatment of Aortoiliac Occlusive Disease Using Kissing Stents in High-Risk Patients: Procedural Results and Long-Term Follow-Up

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Background: Aortoiliac occlusive disease (AOO) is a major cause of claudication and limb-threatening ischemia. Surgical revascularization is associated with high mortality (2-4%) and morbidity (8-13%). Endovascular intervention (EI) using kissing stents (KS) has been used as an alternative to surgery. However, the long-term results are unknown.

Method: We retrospectively analyzed data on 50 patients who underwent EI using KS for AOO at our institution during the last 5 years. Results: Patient demographics are shown in Table 1. 90% of the patients had total occlusion of the distal aorta and/or the iliac arteries. 12% received thrombolytics prior to stenting. The procedure was successful in all 50 patients. There were no perioperative vascular complications, myocardial infarctions or deaths. The mean length of hospital stay was 1.5 ± 0.6 days. Mean ankle brachial index improved to 0.80 ± 0.3 post-procedure. Primary patency during follow-up of 20.5 ± 12 months was 92% while secondary patency rate was 100%. Amputation-free survival was 100%. 92% of patients remained free of life-style limiting claudication. Conclusions: Endovascular treatment of AOO using KS can be performed with excellent procedural and clinical success. Long-term patency rate is comparable to surgical revascularization. Even in patients with severe comorbidities, there were no procedure-related complications.

Penetrating Atherosclerotic Ulcer Treatment by Endovascular Stent-Graft Placement

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Background: Penetrating atherosclerotic ulcer (PAU, class 4 aortic dissection) of the aorta is increasingly 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.

Methods and Results: We prospectively evaluated safety and efficacy of endovascular stent-graft placement in 87 patients with PAU of the aorta. Eighty (95%) patients presented with acute aortic syndrome. Two patients had contained aortic rupture with left hemotherax. With the patients under general anesthesia, stent-graft placement was performed using a transluminal approach.

Results: Endovascular stent-graft placement was technically successful in all patients.