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Impact of Renal Sympathetic Denervation in a Hispanic Population. A Case Series

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Background: Resistant hypertension is defined as uncontrolled blood pressure despite the use of optimal doses of three antihypertensive agents, one of which is a diuretic. recently, catheter-based renal sympathetic denervation (RSD) has been shown to be safe and effective in patients with resistant hypertension. pathophysiology of kidney function, justify the use of renal sympathetic denervation in the treatment of hypertension. the aim of the present report is to briefly summarize and discuss the outcomes of 18 patients treated with RSD in the dominican republic.

Methods: Between august 2011 and may 2012, 18 patients screened for eligibility were referred to renal denervation. we used the Simplicity™ catheter and the EnligHTN™ balloon with low-power radiofrequency energy. post intervention analysis includes all patients remaining during follow-up at 6 months; only 15 were available at follow-up. we performed a paired samples t-test to compare means; two-tailed p values were statistically significant at <0.005 with 95% confidence intervals for mean bp differences.

Results: Among these patients, 46.6% were female, 33.3% were diabetic, and 20% had coronary disease. baseline office blood pressure (BP) was $178.93 \pm 18.38/97.27 \pm 11.62$ mmHg, despite a mean of 7 ± 3.0 medications per patient. successful bilateral sympathetic denervation was performed in all patients. no procedural complications occurred.

At 6-months follow-up, the average office BP was $140.87 \pm 18.24/ 84.33 \pm 11.78$ mmHg. Mean BP reduction at 6 months from baseline was $38.07 \pm 21.38/12.93 \pm 12.58$ mmHg [P<0.0001 for Systolic Blood Pressure (SBP) and P=0.0014 for Diastolic Blood Pressure (DBP)], 95% confidence intervals of this difference was 26.23 to 29.91 mmHg for SBP reduction and from 5.96 to 19.90 mmHg for DBP reduction. There were no adverse events during follow-up (death, myocardial infarction, or stroke), and no deterioration in renal function was observed.

Conclusions: The findings indicate that renal denervation may be a non-pharmacological alternative for the treatment of patients with refractory hypertension in our population and may help stabilize their blood pressures and comorbidities. we have found no previous studies of this procedure with a heterogenic hispanic population. the long term effects of renal denervation should be confirmed in a large international randomized study.

Thoracic and Aortic Grafts

CRT-99

Is The Endovascular Approach Really Better Than Open Repair In Abdominal Aortic Aneurysms Of Octogenarians?

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Aim: We studied the in-hospital mortality rate to access the value of conventional open repair (OR) versus endovascular aneurysm repair (EVAR) in an elderly population presenting with asymptomatic abdominal aortic aneurysm (AAA) undergoing elective repair.

Methods: During the period of January 1999 to December 2011, 781 (m:f=707:74, age in median 72 years; range 43-90) consecutive patients were treated electively for asymptomatic non-ruptured AAA in our department. Among these, 127 (m:f=110:17) were aged ≥ 80 years. The patients were divided into groups according to their age (<80 yrs. versus ≥ 80 yrs.) and therapy (OR versus EVAR). The main outcome measure was in-hospital mortality.

Additionally, a systematic review of the literature (PubMed, Web of Science ISI, Science Direct, Cochrane) and meta-analysis was performed. Considered for the analysis were studies published as full-length articles, reporting the outcome of patients aged ≥ 80 years comparing electively performed OR and EVAR for asymptomatic AAA. Studies including repair for symptomatic or ruptured AAA were excluded.

Results: The mortality rate following electively performed AAA repair was 1.4% (11/781). According to the therapeutic approach (OR versus EVAR) mortality rate was 1.4% (5/362) versus 1.4% (6/419).

When comparing mortality of the different therapeutic approach in the octogenarians (n=127), 2 of the patients that received OR (n=38) and 3 of the patients that received EVAR (n=89) died (5.3% versus 3.4%, P=NS). In younger patients (<80 years), hospital mortality was equal in OR and EVAR group (3/324; 0.9% versus 3/330, 0.9%).

Systematic review and meta-analysis revealed only three further single centre studies and three registers or multi-centre trials dealing with electively performed OR vs. EVAR for asymptomatic AAA in octogenarians.

Considering only the four single centre studies, the increase in operative mortality in AAA repair in octogenarians associated with OR was not statistically significant compared to EVAR (Peto OR, 0.499; 95% CI, 0.197 - 1.264; p = 0.143).

Conclusion: Our study confirms an acceptable mortality rate in electively performed therapy of AAA in octogenarians. In general, EVAR showed superiority to OR, but age-adjusted mortality rates were similar for OR and EVAR. Therefore, even octogenarians with an anatomy not suitable for an endovascular approach, should not be excluded from electively performed OR of their AAA.

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A Novel Total Endovascular Approach Treating Complex Aortic Arch Aneurysms In High Risk Patients

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Objective: To report our early experience with total endovascular repair of aortic arch aneurysm using additional trans-carotid double chimney-grafts to preserve blood flow to supraaortic arteries.

Patients and Methods: The double chimney-graft technique was performed in six male patients. Main diagnoses were ruptured aneurysm, dissecting aneurysm, pseudoaneurysm and penetrating aortic ulcer (PAU). Two patients had a type Ia endoleak after TEVAR. Three patients had a history of sternotomies. In all cases all supra-aortic vessels had to be covered with aortic stent-graft to receive sufficient landing and sealing zone. Additionally, a carotid-to-subclavian bypass was performed in three cases in order to preserve the vertebrobasilar blood supply. Chimney legs were introduced to the ascending aorta slightly deeper than thoracic stent-grafts through the cut-down exposure of the common carotid arteries.

Results: We deployed aortic stent-grafts and self-expandable chimney-grafts simultaneously and successfully. The patient with a ruptured aneurysm died due to cardiopulmonary failure on day 19, and the others survived. We detected two "gutter" endoleaks.

Conclusions: The triple-barrel chimney technique to supply blood flow to the supra-aortic vessels has been performed successfully in a small number of high-risk patients. It may be used in patients where the proximal landing zone of endograft would be in zone 0 and no other option is available. The long-term follow-up remains to be evaluated with the increased number of patients treated.

Vascular Access

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No Closure on Publicly Reported Adverse Events with Vascular Closure Devices

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Background: The use of vascular closure devices (VCDs) following transfemoral procedures reduces recovery time and may reduce bleeding. Transradial (TR) access is associated with fewer adverse events (AEs). The frequency of real-world AEs with VCDs and the effect of increasing TR access are unknown.

Methods: The FDA Manufacturer and User Facility Device Experience (MAUDE) database was queried for the years 2007-2011. Specific VCDs queried included AngioSeal (St. Jude Medical, Saint Paul MN), StarClose and Perclose (Abbott Vascular, Santa Clara