εLeft Ventricular Mass: A Strong Predictor of Death in Stented Renal Artery Patients

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Background: Percutaneous dilation and stenting of Renal Artery Stenosis (RAS) has been applied as a complementary invasive method to cope with (ACC/AHA Guidelines for the Management of Patients with Peripheral Arterial Disease 2006): hypertension refractory to drug therapy (class IIa, loe B), anticipating recurrence of pulmonary edema (class I, loe B) or deterioration of kidney function. (class IIa, loe B).

Objective: Evaluate outcomes of RAS patients stented in our cath lab.

Population & Methods: 126 patients (aged 72.9± 9.0, 71 males) , were stented between 2004-7 ; bilateral RAS in 40 patients (16 of the 40 bilateral RAS patients underwent both lesions stent implantation). Most (94%) patients had lesions >90% stenosis.

Results: Twenty eight patients were dead in December 31, 2010. Table A presents variables associated with death. Neither LVEF<35% nor ECG-LVH predicted death.

	Survivors n=98	Dead n=28	p
Baseline Creatinine (mg%)	1.3‡0.56	1.72‡1.3	0.006
Diabetes Mellitus (%)	35(36)	16(57)	0.042
Triglycerides (mg%)	152.3‡61.5	181.5‡75.8	0.04
Contrast Dose (ml)	139.9‡62.5	181.2‡83.2	0.007
Prior MI (%)	38(39)	17(61)	0.039
LV-Mass (gr)ε	183.05‡47.5	226.8‡62.45	0.009

ε49 cases only, ξ LV mass(gr) = 0.8[1.04{(pwt+lvid+swt)3 - lvid3}] +0.6 (Devereux RB, Reichek N . Circulation 1977 , 55:613-618

By multi variable analysis (Table B)

Variable	Odds Ratio	Confidence Interval	p value
LVmass (gr%)	1.012	1.002-1.022	0.014
DM	2.36	0.848-6.566	0.1

Conclusions: Death was related to Echo-determined LVH but not to ECG-LVH or depressed LVEF. We are unable to comment on effect of renal stenting on mortality; Compared to ASTRAL trial (n=806 , mean age-71 years, 33.6 month f/u , 26 % death) although our cohort was sicker (not shown), still death rate at 55.6 month f/u was lower - 22% only.