

Here we describe a series of 5 cases in which RDN was performed in patients with ESRD and resistant hypertension. The RF energy was delivered using the standard RF delivery system that is used in cardiac electrophysiology lab and a standard 5F, 4mm tip RF ablation catheter was used. Additionally multiple 3 dimensional imaging and catheter monitoring modalities were used to precisely pinpoint the site of RF energy delivery. Dyna CT, a novel 3D imaging tool was used to precisely define the anatomy and annotate the radiofrequency lesions given in a spiral fashion along the length of the arteries. In addition, non fluoroscopic anatomy was created using the NavX Version 3 system.

The procedure was completed without any complications in all 5 patients. The average procedure time was 28 min and average of 5.6 lesions was given in each renal artery. Post procedure renal parameters did not show any significant difference at 48 hrs and at 1 month followup.

There was a significant drop in blood pressure in all the patients  $38 \pm 18$  mmHg in systolic and  $16 \pm 14$  mmHg fall in diastolic BP at 1week follow up and  $39 \pm 22$  mmHg systolic,  $18 \pm 13$  mmHg fall in diastolic BP at 1 month follow up.

To the best of our knowledge, this is the first time in the world that such precision technology has been used to guide this promising new therapy. This also is amongst the first case series of renal failure patients treated with renal denervation. This is also the first report of usage of standard RF ablation catheters for renal denervation and has the potential of widespread usage in labs already equipped with EP systems without any additional expenditure.

## CRT-129

### Catheter Ablation of Hemodynamically Unstable Ventricular Tachycardia under Support of Left Ventricular Assist Device

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**Background:** Although hemodynamically unstable ventricular tachycardia (VT) may be ablated with the aid of mechanical hemodynamic support, little is known regarding the impact of possible hypo-perfusion of vital organs during such procedures.

**Objective:** This study investigated whether catheter ablation of unstable VT in the presence of mechanical hemodynamic support may cause acute renal injury.

**Methods:** Between April 22 2009 and September 14 2012, 15 consecutive patients (aged  $63 \pm 12$  years with left ventricular ejection fraction of  $19 \pm 9\%$ ) who underwent ablation of hemodynamically unstable VT were included in this study. Hemodynamic support included percutaneous (Impella, n=5) and implantable (n=7) left ventricular assist device (LVAD) and percutaneous cardiopulmonary bypass (CPB, n=5).

**Results:** Except for 2 case in which Impella® was used, hemodynamic support was considered adequate (with consistent mean blood pressure of  $>60$  mmHg). VT was terminated at least once during ablation in all patients. Hemolysis was observed in 1 patient with Impella, and failure to insert Impella due to access problem was encountered in another. Surgical intervention was needed in 2 patients with Impella due to bleeding and entangled Preclose® device, respectively. The mean time under hemodynamic support was  $243 \pm 96$  minutes, and time in VT was  $98 \pm 67$  minutes. There was no significant change in creatinine, blood urea nitrogen, or glomerular filtration rate (GFR) at days 1 and 3 after the procedure compared to baseline values in all patients except one using Impella with bleeding and inadequate hemodynamic support.

**Conclusion:** Our data suggest that percutaneous CPB and implantable LVAD provide adequate hemodynamic support for ablation of unstable VT as evidenced by unchanged renal function after procedure. Impella, on the other hand, was associated with more complication risk, and may not provide sufficient hemodynamic support in unstable VT patients.

## CRT-130

### Efficacy and Safety of Adjuvant Proximal Balloon Inflation Comprising Stent Proximal Edge for Full Expansion of the Stent by Stent Balloon

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**Background:** Another shorter & bigger non-compliant balloon is being used for optimal expansion of the stent, particularly the proximal portion of the stent when the proximal and distal reference vessel diameters(RVD) are significantly different. The safety and efficacy of adjuvant proximal balloon inflation (PBI) comprising proximal edge of the stent using stent balloon with higher inflation pressure are largely unknown. This strategy was intended to reduce procedural time, contrast amount and cost when we do the adjuvant ballooning for optimal stent expansion.

**Methods:** This study consisted of 2164 consecutive patients (pts) underwent percutaneous coronary intervention (PCI) with drug-eluting stents (DESs). A total 211 pts (259 lesions) have performed PBI using same stent balloon. 6-month angiographic and 12-months clinical outcomes were compared between the PBI group and non-PBI group.

**Results:** The baseline clinical and procedural characteristics were balanced between the two groups, except that the left circumflex lesions were more common in the PBI group. There was no difference in procedural success rate and in hospital complications between the two groups, except that the incidence of peri-procedural myocardial infarction (MI, 5.8% vs. 10.4%,  $P<0.001$ ) was higher in the PBI group. At 6-month, the follow up minimal luminal diameter (MLD) was smaller in the PBI group. However, this angiographic benefit was not translated into the clinical benefit up to 12 months. (Table).

**Conclusion:** PBI was associated with higher incidence of peri-procedural MI but other safety profiles, procedural success, in-hospital complications, mid-term angiographic and clinical outcomes were similar with those of non-PBI group. PBI can be a cost-effective strategy when the proximal and distal RVD are significantly different at the time of stent implantation.

Table. Angiographic and Cumulative Clinical Outcomes

Variables, n (%)	Non PBI (n=1834)	PBI (n=200)	p-value
<b>6 to 9 Month Angiographic Outcomes.</b>			
Diameter Stenosis, %	23.9±21.1	24.2±19.8	0.842
Follow up MLD (mm)	2.30±0.77	2.19±0.73	0.082
Late Loss (mm)	0.57±0.64	0.52±0.59	0.332
<b>12-Month Cumulative Clinical Outcomes.</b>			
Total Death	82 (4.4)	10 (5.0)	0.733
Cardiac Death	55 (2.9)	7 (3.5)	0.695
Any MI	26 (1.4)	5 (2.5)	0.235
Q-MI	19 (1.0)	3 (1.5)	0.547
Revascularization	190 (10.3)	19 (9.5)	0.704
TLR	114 (6.2)	14 (7)	0.665
TVR	144 (7.8)	15 (7.5)	0.860
Non-TLR TVR	54 (2.9)	3 (1.5)	0.240
Non TVR	49 (2.6)	4 (2)	0.571
All MACE	267 (14.5)	30 (15)	0.867
Stent thrombosis	24 (1.3)	2 (1.0)	0.712

## CRT-131

### Percutaneous Thrombectomy With Primary Coronary Right Judkins 8 French Guide For The Treatment Of Acute Pulmonary Embolism High Risk

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**Objective:** A) patency of the pulmonary arteries by thrombus aspiration with right coronary guide catheter. B) Improve the function of the right ventricle. Reduce mortality.

**Material:** A total of 38 patients, 20 female and 18 male between 28 and 64 years from March 2009 to April 2012. In 37 patients the obstruction was bilateral in all patients, the degree of obstruction was greater than 80% of the main branches. In all cases, introducing a long metal 8 french by 80cm in length and 8 french catheter coronary Judkins guide and a 20ml syringe. the diagnosis was formulated with pulmonary angiotomography echocardiogram.

**Method:** By puncturing the femoral vein was placed a metal sheath of 8 french by 80cm in length to the trunk of the pulmonary artery and this was passed through a guide catheter handle 4 Judkin right coronary to the site of thrombosis and 20ml syringe practice is sustained suction catheter to remove it slowly withdrawing the introducer. subsequently purging the catheter to remove thrombi were aspirated. This maneuver was repeated several times and finally a practical handbook with this catheter angiography to confirm the patency of the pulmonary branches.

**Results:** In all cases it was possible achievement for all thrombi. was obtained permeability of the pulmonary branches of 80% saturation was restored and blood pressure in the next few hours. Of the 38 patients, one died during the procedure and another

patient had hemoptysis. The procedure had a mortality rate of 2.63% and a morbidity of 2.63%.

**Conclusion:** This is an effective technique for the treatment of acute pulmonary embolism reproducible high-risk low-cost and reestablished blood pressure, oxygen saturation and right ventricular function and struck morbidity significant.

### Renal Denervation

#### CRT-132

#### Catheter-based Renal Denervation Lowers Blood Pressure in Obese, Hypertensive Canines

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Obesity is associated with significant increases in arterial blood pressure, heart rate, and glomerular filtration rate (GFR). Previous studies have shown that obesity-induced hypertension is due, in part, to increased renal sympathetic activity which causes sodium and water retention. Recently, catheter-based renal denervation (RD) has been reported to lower arterial blood pressure in humans with 'resistant' hypertension. The current study was designed to test if RD lowers arterial blood pressure in obese, hypertensive canines. Obesity hypertension was created in mongrel hounds by feeding them a high fat diet for five weeks. Blood pressure and heart rate were measured 24-hours per day using arterial catheters and GFR with <sup>125</sup>I-iothalamate clearance. After two weeks of control (Con) measurements, bilateral RD was performed in nine canines by radiofrequency ablation from within the renal arteries using the St. Jude Medical EnligHTN™ renal denervation system. Following RD, blood pressure was measured continuously for eight weeks and GFR was measured bi-weekly for six weeks. At the end of the eight-week period, both left and right renal arteries were collected for histological analysis, and kidney samples were obtained for renal catecholamine evaluation. Mean arterial pressure decreased from 109 ± 2 mmHg in the Con period to 99 ± 2 mmHg after RD (p<0.01). The largest change was seen in systolic blood pressure which fell from 157 ± 5 mmHg during the Con period to 132 ± 2 mmHg after RD (p<0.01). RD lowered diastolic blood pressure from 89 ± 2 mmHg to 85 ± 2 mmHg (p<0.01). There were no significant changes in heart rate (Con 96 ± 3 vs. RD 103 ± 6 beats per minute) or GFR (Con 90.5 ± 5.3 vs. RD 90.3 ± 3.6 mL/min). RD caused injury in at least 42% of the renal nerves observed and reduced renal tissue catecholamine by 47% (p<0.01). Histological examination of the renal arteries revealed minor endothelial and medial fibrosis in areas of the lesions and no signs of renal arterial stenosis were observed. Thus, catheter-based renal denervation lowers blood pressure in obese canines without compromising renal function or vascular integrity.

## VALVE & STRUCTURAL HEART

### Aortic Valve

#### CRT-133

#### Predictor That Influence The Degree Of Severity Of Mitral Regurgitation Post Transcatheter Aortic Valve Replacement Using Edward Sapien Valve

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**Background:** Mitral Regurgitation (MR) is frequent finding in patient (Pt.) with Aortic stenosis (AS). The study objective is to know the predictor that influences the change in degree of MR severity post Transcatheter Aortic Valve Implantation (TAVI).

**Method:** Between April 2009 - January 2012, 50 consecutive patients with Aortic Stenosis underwent (TAVI) procedure with Edward-Sapien Valve in PSCC. MR assessed by visual mapping flow.

They were divided into two groups G1 (MR improved after TAVI) G2 (MR did not improved after TAVI).

**Results:** Procedural success 96%

#### Character of patient and Hemodynamic and Echocardiography finding

CHARACTER	G1	G2	P.V
Age			
Gender F	78.1 ± 10	77 ± 9	
M	15	10	NS
EFIGIOLOGY OF MR	12	13	NS
FUNCTIONAL	13	11	NS
ORGANIC	12	9	NS
MEDICAL HISTORY	11	19	(S) (0.030)
HYPERTENSION	14	21	NS
DM	12	17	NS
CAD			
PROCEDURE APPROACH	17	11	NS
TF - FEMORAL	10	12	NS
TA - APICAL	50	48	NS
PRE-MEAN AV GRADIENT	10+2	12+3	NS
POST-MEAN AV GRADIENT	40±	37.6+6	NS
DEGREE OF MEAN AVERAGE CHANGE	53+5	54+6	NS
PRE LV EJECTION FRACTION	54+6	50+7	NS
POST LV EJECTION FRACTION	44+6	40±10	NS
PRE PULMONARY ARTERY PRESSURE	37±5	39±11	NS
POST PULMONARY ARTERY PRESSURE(PAP) DEGREE OF PAP CHANGE	8.3±10	1±8	S.041