with left main and or triple vessel CAD often have significant co-morbidities making them extremely high risk for mortality & morbidity related to post-CABG recovery. For such patients Impella supported PCI is feasible.

Methods: Retrospective analysis of 225 procedures in 200 patients undergoing high risk PCI with Impella support between 8/2008 and 5/2012 from an inner city hospital with multiple co-morbidities was evaluated in this study. We present their demographics, in-hospital and 30 day survival along with co-morbidities (STS, EUROSCORE I & II and PARSONNET) and coronary risk profile based on Syntax scoring.

Patient Characteristics

| Age (mean) | 78.4 years +/- 8.3 |
| Caucasians/African-americans | 55%/42% |
| Gender % (males/females) | 73.5/26.5 |
| LVEF (mean) | 24% +/- 12% |

Co-morbidities

- Prior MI: 72%
- Prior PCI: 69%
- Diabetes (on medications oral/insulin): 67%
- PVD: 44%
- CKD Stage IV/V (GFR < 30): 36%
- COPD (on inhalers): 32%
- Prior CABG: 28%

Co-morbidity based mortality Risk Scoring

- STS – Mean Risk of Procedural Mortality: 6.3% +/- 4.8%
- STS – mean Mortality or morbidity: 36.8% +/- 13.7%
- Mean EuroSCORE II predicted mortality: 16.67% +/- 9.8%
- Mean EUROSCORE predicted mortality(logistic): 40.5% +/- 18%
- Mean Parsonnet predicted 30 day mortality: 20.5% +/- 10.3%

Coronary Lesion Characteristics and Syntax risk scoring

- Left Main + multivessel: 43%
- Multivessel: 34%
- Syntax Scoring 0-22: 52%
- Syntax Score 23-32: 38%
- Syntax Score > 33: 10%

Results: Among the 200 patients who underwent 225 high risk PCI with Impella support, there was only 1/225 (0.44 %) in-hospital mortality. The mean length of hospital stay was 3.71 +/- 1.9 days. 2 patients were lost to follow up, of the remaining 197 patients, the 30 day survival was 99.5%.

Conclusions: Our experience demonstrates that use of the Impella 2.5 for prophylactic circulatory support during high-risk PCI in the “real world” is safe and feasible, expanding treatable patient populations. The excellent outcomes rival or exceed those published contemporary CABG series for low, intermediate or high risk patients.

TCT-377

Impact of New-Onset Acute Heart Failure in Patients with Acute Myocardial Infarction Underwent Successful Revascularization

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Background: There are a few data of clinical outcome of new-onset acute heart failure (AHF) during hospitalization in patients with acute myocardial infarction (AMI) underwent successful revascularization. There are a few data of clinical outcome of new-onset acute heart failure (AHF) during hospitalization in patients with acute myocardial infarction (AMI) underwent successful revascularization. However, was highly associated with in-hospital mortality. Therefore, even though they underwent successful revascularization, intensive treatment and careful monitoring should be required for patients with high risk of new-onset AHF.

Conclusions: New-onset AHF rarely occurred in patients with AMI underwent successful revascularization, however, was highly associated with in-hospital mortality. Even though they underwent successful revascularization, intensive treatment and careful monitoring should be required for patients with high risk of new-onset AHF.

TCT-378

Interim analysis of the Reitan Catheter Pump (RCP) heart failure efficacy study: RCP improves cardiovascular and renal function in acute decompensated heart failure (ADHF)

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Background: The RCP is a 14 French collapsible percutaneous cardiovascular support device placed in the descending part of the thoracic aorta via the femoral artery. A 10 patient first in man study demonstrated device safety and favorable improvement in renal function among high risk PCI patients. We now report haemodynamic and renal efficacy in patients with ADHF.

Methods: Prospective non randomised multi-centre study seeking to recruit 20 patients with ADHF and a need for mechanical circulatory assistance or increased afterload. Key endpoints were: 1) Cardiac index (CI) 2) Pulmonary Capillary Wedge Pressure (PCWP) 3) Urine output/serum creatinine (eGFR) 4) Vascular/device complications 5) 30 day mortality

Results: INTERIM ANALYSIS (n=14) The mean age of the study group was 64.5 years. The intended RCP treatment period was 24 hours. During RCP treatment there was a 30% improvement in mean Cardiac Index (CI) measured at 24 hours (1.85 to 2.45 L/min/m² p=0.08), and a concomitant trend towards reduction in PCWP at 24 hours of 28% (27 to 20 mmHg p=0.28). RCP insertion prompted substantial diuresis. Urine output doubled over the first 24 hours compared to baseline (74 ml/hr vs 157 ml/hr p=0.006). This was associated with significantly improved renal function, a 22% reduction in serum creatinine at 24 hours (174 to 142 umol/l p=0.0002) and a increase in eGFR from 50.2 ml/min to 61 ml/min (p=0.001). 2 patients previously refused cardiac transplantation were reassessed and successfully transplanted within 9 months of RCP treatment on the basis of demonstrable renal reversibility. There were no vascular or device complications.

There were 2 deaths at 30 days, one from multi-organ failure and sepsis, and one from intractable heart failure – neither were device related.

Conclusions: The Reitan Catheter Pump improves haemodynamics and renal function in the acutely decompensated cardiac patient, and may have a role in suggesting renal reversibility in potential cardiac transplant patients. Further data will be reported at recruitment completion.

TCT-379

Percutaneous Transcatheter Aortic Valve Closure Successfully Treats Left Ventricular Assist Device-Associated Aortic Insufficiency and Improves Cardiac Hemodynamics

Kishan Parikh¹, Amit Mehrotra², Mark Russo³, Roberto Lang⁴, Allen Anderson⁵, Valluvan Jeyavanam¹, Benjamin Freed⁴, Jonathan Paul⁴, Janet Karol⁴, Sandeep Nathan⁴, Atman Shah⁴
¹University of Chicago, Chicago, IL

Background: The increased use of continuous-flow LVADs in advanced heart failure has led to marked changes in the management of patients with this condition. However, secondary AI can become a significant complication. Our objective was to assess the effectiveness of a novel percutaneous device to treat left ventricular assist device (LVA)-associated severe aortic insufficiency (AI) in a series of patients determined to be intractable heart failure - neither were device related.

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