Results: Age 66.8 ± 9.4 years, 84% male, 80.3% hypertension, 37 patients with non-ischemic HF (nIHF). For IHF and nIHF at baseline: LVEF ≤ 30% or with unprotected left main/last patent conduit and LV ejection fraction ≤ 35% during PCI. Patients were randomized to either intra aortic balloon pump (IABP) or Impella (Abiomed). The primary endpoint was a composite of ten major adverse events (MAE) measured at 30 and 90 days. Economic analyses were performed to assess resource utilization for patients treated with Impella compared to IABP from index stay up to 90 days. Itemized hospital bills were collected for U.S. patients that underwent PCI; non-U.S. costs were estimated using department level cost-to-charge ratios, and modeled for the complete trial patient population at 90 days. Estimated costs were validated via comparison with MedPAR. Measures of episode-of-care costs, major adverse cardiac and cerebral events (MACCE), and Quality-Adjusted Life Years (QALYs) for both study arms served as inputs to a Markov model to estimate the incremental cost-effectiveness ratio (ICER).

Conclusion: For patients with severe LV dysfunction and complex anatomy, prophylactic use of Impella during PCI reduced MAE at an incremental cost per QALY that is better, so a large number of patients how could be beneficiated by a Coronary angioplasty with Stent (PCI) receive medical treatment. Reductions in repeat revascularizations, readmission costs and length of stay may have significant health policy implications.

TCT-485

Aspiration of The Blood From The Left Ventricular cavity to Treat Refractory Ventricular Arrhythmias During Complex Coronary Interventions

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Background: Ventricular fibrillation (VF) may happen during complex coronary intervention due to wire or catheter manipulation, balloon inflation or reaction to the contrast. This can be treated easily with prompt cardiovascular; however some of VF may become refractory especially in the cases of severe ischemic burden, elevated left ventricular filling pressure (LVEDP) or reduced left ventricular function.

Methods: We report a new simple quick method to reduce LVEDP by inserting a catheter (e.g a pigtail or JR) inside the left ventricle (LV) and doing quick manual aspiration of 80-100cc of blood from the LV cavity. This will quickly reduce the LVEDP and make refractory VF easily responsive to cardiac version. It can also provide a simple decompression of the overfilled LV after prolonged circulatory arrest.

Results: This method was used in 8 cases of refractory VF. Five of them failed 3 attempts of DC cardioversion due to severe ischemic burden, elevated left ventricular filling pressure (LVEDP) and refractory VF.

Conclusion: Quick insertion of a catheter in the LV with quick blood aspiration facilitates response to cardioversion and may relief VF not related to tamponade during coronary intervention. It looks that the interventional cardiologists need this simple way of LV venting in the cath lab.

TCT-486

Medical Treatment and Coronary Angioplasty in Patients with Severe Left Ventricular Dysfunction and Coronary Artery Disease

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Background: Coronary artery disease (CAD) is the cause of Ventricular Dysfunction and Heart Failure (HF) in the majority of patients (pts), and HF is the only mode of CAD presentation associated with increasing incidence and mortality. Among a large number of patients there is no evidence about which therapeutic strategy is better, so a large number of patients how could be beneficiated by a Coronary Angioplasty with Stent (PCI) receive medical treatment.

Methods: Methods: Between June 2005 and December 2010 we performed 3450 consecutive coronary angiographies, among those pts 255 (7.4%) have had angioplasty with stent (PCI) receive medical treatment. Drug eluting stents (DES) were used in 63.2% of PCI. The others 92 pts (36.1%) continues with MT. Twelve (12) pts received definitive pace-maker and 10 pts. ICD. Total mortality was 13.5%, no significant differences were found among groups. At follow-up pts who underwent PCI showed an statistically significant diminution in dyspnea FC from III-IV to I-II and other symptoms (FC I-II 21.7% vs. 66.0% post PCI, p<0.0001 and FC III-IV 73.3% vs. 7.6% post PCI, p<0.0001, asymptomatics 5.0% vs. 26.4 at FU, p 0.02) compared with MT group pts (FC I-II 0% vs. 17.9%, p< FC III-IV 13.9% vs. 7.7% at FU, p 0.37, asymptomatics 86.1% vs. 74.4% at FU, p 0.18). In the CABG group asymptotics pts were 69.2% pre CABG and 63.6% at FU, p 0.8.

Conclusion: Conclusion: in pts with severe left ventricular dysfunction (LVEF <35%) and CAD, PCI improved symptoms and there after quality of life and don’t increase mortality at long term Follow up.

TCT-487

Coronary Sinus Technique in End Stage Heart Failure

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Background: Randomized studies suggest that intracoronary transplantation of autologous cells may improve left Ventricular Ejection Fraction (LVEF) in heart failure (HF).

Methods: 77 patients were enrolled and completed 5 years follow up. Patients underwent SPECT evaluation; all had LVEF ≤ 25%, 40 patients with ischemic HF (IHIF) and 37 patients with non-ischemic HF (nHF). For IHIF and nHF at baseline: the median age was 67 and 64 years old respectively (ns); NYHA III/IV were 31/9 and 29/8 respectively (ns); median LVEF were 18.7% and 24.7% respectively (ns); median EDV were 281 ml and 242 ml respectively (p=0.16, ns) and median ESV were 217 ml and 189 ml respectively (p=0.29, ns). Median numbers of MNC & CD34+ cells were 12*10^8 & 23*10^6 respectively. Cells were delivered in 90 cc using a retrograde technique by coronary sinus approach using a balloon occlusion “over wire” for 10 to 15 minutes. No early or late study related adverse events were observed.

Results: After a median of 21 days, patients in both groups had relief of dyspnea symptoms and improvement in functional class. All patients were evaluable at one year and 32 and 30 in each group for 5 years follow-up. Differences (Δ) and statistic difference (p) are shown in the table:

<table>
<thead>
<tr>
<th>Δ</th>
<th>1 YEAR</th>
<th>5 YEARS</th>
<th>9 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYHA grade resolution</td>
<td>1 (18%)</td>
<td>2 (14%)</td>
<td>2 (14%)</td>
</tr>
<tr>
<td>IHIF (n=25)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>nHF (n=30)</td>
<td>2 (7%)</td>
<td>2 (7%)</td>
<td>2 (7%)</td>
</tr>
<tr>
<td>AEDV (median, ml)</td>
<td>295 (205-390)</td>
<td>251 (201-390)</td>
<td>240 (201-390)</td>
</tr>
<tr>
<td>IHIF (n=30)</td>
<td>120 (95-155)</td>
<td>100 (95-155)</td>
<td>110 (95-155)</td>
</tr>
<tr>
<td>nHF (n=27)</td>
<td>120 (105-155)</td>
<td>115 (105-155)</td>
<td>115 (105-155)</td>
</tr>
</tbody>
</table>

Conclusion: Infusion of autologous bone marrow cells into the coronary vein is safe and feasible. It is associated with significant improvement in symptoms and functional capacity benefit. Both groups benefited in terms of LVEF improvement and lower ESV. Our data suggest that nHF patients have a higher LVEF increment than HF patient and lasting up to 5 years; revealing a high restoracion of myocardial dysfunction. Further randomized studies are warranted.