support with each device. For each animal, over 300 data points were collected for EDV, ESP, SV, SW, and PVA and then compared to baseline. The results are in Table 1.

Results: The TandemHeart device reduced the stroke work by 65% (p =0.013), stroke volume by 77%, (p =0.020), and PVA reduction of 52% (p =0.061) relative to Baseline. The Impella CP reduced the stroke work by 3% (p =0.758), stroke volume by 11%, (p =0.42), and PVA by 23% (p =.391) relative to Baseline.

Conclusions: Percutaneous ventricular assist for acute for myocardial injury affords ventricular unloading during cardiac recovery. The Tandem heart device appears to offer an advantage over the Impella based on these preliminary data that need to be validated clinically.

Table 1.	Average	Std Dev	p-value
Baseline SV (mL)	56.63	30.56	0.420
Impella SV (mL)	50.87	28.30	
Baseline SV (mL)	69.04	55.64	0.020
TandemHeart SV (mL)	16.10	20.52	
Baseline SW (J)	0.61	0.29	0.758
Impella SW (J)	0.59	0.37	
Baseline SW (J)	0.68	0.21	0.013
TandemHeart SW (J)	0.24	0.28	
Baseline EDV (mL)	177.02	32.44	0.089
Impella EDV (mL)	155.90	39.78	
Baseline EDV (mL)	192.04	13.72	0.243
TandemHeart EDV (mL)	175.61	25.80	
Baseline ESP (mmHg)	100.43	14.86	0.356
Impella ESP (mmHg)	106.86	23.53	
Baseline ESP (mmHg)	94.63	16.55	0.160
TandemHeart ESP (mmHg)	82.52	47.61	
Baseline PVA (J)	0.94	0.85	0.391
Impella PVA (J)	0.72	0.98	
Baseline PVA (J)	0.67	0.53	0.061
TandemHeart PVA (J)	0.32	0.50	
Baseline dP/dt max	1114.7	275	
Impella dP/dt max	1059.5	247	0.722
TandemHeart dP/dt max	672.3	112	0.009

TCT-454

Safety and Efficacy of the Svelte™ Acrobat Integrated Coronary Stent System by Radial Approach and 5 French Catheters

Fernando S. Devito[1], Pedro B. Andrade[2], carlos eduardo f silva[3], Alexandre Abizaid[1], Jose d Costa Jr[1], Ricardo A. Costa[4], Amanda Sousa[5]
[1]Instituto Dante Pazzanese de Cardiologia, São Paulo, Brasil, [2]Santa Casa de Marilia, Marilia, Brasil, [3]Hospital padre Albino - FIPA, Catanduva, Brasil, [4]Instituto Dante Pazzanese, Sao Paulo, Brazil, [5]Dante Pazzanese, São Paulo, Brazil

Background: Direct Stenting (DS) has become a feasible and safe technique, with potential clinical benefits, but it is only performed in 30 to 60% of all PCIs. The aim of this study is to evaluate the success of direct Svelte™ Acrobat Integrated Stent System (ISS) via radial approach and 5 French Catheters. This unique system permits easy delivery, deployment and post-dilatation of a cobaltchromium stent, designed to direct stenting.

Methods: Patients with Coronary Artery Disease (CAD) were prospectively enrolled at three centers in Sao Paolo, Brazil, to percutaneous Coronary Intervention (PCI) with direct stenting via radial approach and 5 F catheters. The Primary end point was the ISS success, defined as direct stenting without post-dilatation with additional balloon and final stenosis less than 20% with TIMI III flow.

Results: Fifty patients with 55 lesions were included. Procedure success was 98%. In two cases the device couldn't cross the lesion and we had to predilate, so direct stent success was 96%. Direct stenting without additional balloon post-dilatation and residual stenosis less than 20% was sussessfull in fifty lesions, so the ISS success was 91%. The procedure length time was 21 minutes (SD=9), the fluoroscopy time was 437 seconds (SD= 280) and contrast volume used was 103 cm3 (SD=33). Final residual stenosis, by QCA, was only 3.4% (SD=4). Considering the reduced need for additional catheters, there were 20% saving in procedure costs. There were no bleeding or vascular complications. At eight months the event-free survival was 84%.

Conclusions: Direct stenting with the Svelte Acrobat™ ISS is safe and efficacy in selected patients with CAD by radial approach and 5 French catheters and also associated to potential procedure costs reduction.

TCT-455

Tongxinluo reduces infarct size by promoting endothelial adhesion junction integrity in reperfused diabetic hearts via PPAR-α pathway

Kang Qi[1], Hehe Cui[1], Leipei Jiang[1], Xiangdong Li[1], Yuejin Yang[2]
[1]Peking Union Medical College,Chinese Academy of Medical Sciences,Fuwai Hospital, Beijing, China, [2]Chinese Academy of Medical Sciences,Fuwai Hospital, Beijing, China

Background: Structural and functional disruption of microvascular barrier caused by ischemia/reperfusion results in uncontrolled inflammation and ischemia/reperfusion injury (IRI). Hyperglycemia may aggravate myocardial IRI since it worsens the barrier function. Whether Tongxinluo (TXL) is involved in reperfused diabetic heart protection through protecting cardiac microvascular endothelial cells (CMECs) is unknown. In order to confirm the effect and mechanism of TXL-mediated cardiac protection, studies in vitro and in vivo were conducted.

Methods: HCMECs were cultured in normal (5.5mM) and high glucose (18mM) for 48 h respectively followed by glucose-oxygen-serum deprivation (GOSD) for 2 h and reoxygenation for 2 h. TXL (800μg/ml), PPAR-α inhibitor MK886 (1mM) were supplemented. Endothelial monolayer permeability was assessed. VE-cadherin internalization was detected by confocal microscope and western blotting. ICAM-1 expression was detected by western blotting. ZDF rats with Type 2 diabetes mellitus (T2DM) underwent 45 min ligation and 3 h reperfusion of LAD. Vascular permeability and infarct size were determined by FITC-dextran and TTC staining respectively.

Results: Endothelial monolayer permeability was significantly increased after the GOSD/ reoxygenation treatment in a time and glucose concentration-dependent manner. Compared with the control group, TXL dramatically decreased the fluorescence intensity (1925±138 vs. 3558±133) and ICAM-1 expression, but remarkably increased the membrane/total VE-cadherin [(35±4)% vs. (84±6)%] in HCMECs. TXL significantly reduced fluorescence intensity (2914±388 vs. 4728±483) and infarct size [(45±6)% vs. (52±3)%] of ZDF rats with T2DM in AMI/reperfusion model compared with control group. These protective effects of TXL were partly inhibited by MK886.

Conclusions: Accordingly, TXL protects reperfused diabetic heart through attenuating VE-cadherin-mediated paracellular hyperpermeability via PPAR-α pathway.