

Table 12-month clinical outcomes

Variable, n(%)	PCI (n=67)	OMT (n=66)	P Value (Unadjusted)	P Value (Adjusted)	OR (95%CI)
Mortality	3 (4.4)	12 (18.1)	0.012	0.561	1.69 (0.28 - 10.0)
Cardiac death	2 (2.9)	7 (10.6)	0.080	NS	-
Non cardiac death	1 (1.4)	4 (6)	0.166	NS	-
Myocardial infarction; MI	2 (2.9)	9 (13.6)	0.026	0.260	3.10 (0.43-22.3)
Q wave MI	1 (1.4)	5 (7.5)	0.091	NS	-
Non Q wave MI	1 (1.4)	4 (6)	0.166	NS	-
Revascularization	10 (14.9)	11 (16.6)	0.783	0.894	1.08 (0.33-3.46)
TLR	8 (11.9)	0 (0)	0.004	0.997	-
TVR	10 (14.9)	6 (9)	0.301	NS	-
Non TVR	2 (2.9)	5 (7.5)	0.236	NS	-
All MACE	13 (19.4)	22 (33.3)	0.068	0.824	1.11 (0.42-2.95)
TLR MACE	10 (14.9)	8 (12.1)	0.636	NS	-
TVR MACE	13 (19.4)	19 (28.7)	0.206	NS	-

Adjusted by gender, age, myocardial infarction, hypertension, diabetes, chronic kidney disease, current smoker, multivessel disease, collateral vessels (≥grade 2), and failed CTO procedure.

Complex Coronary Intervention

CRT-142

Correlation Between Indices of Kidney Function (Estimated Glomerular Filtration Rate and Proteinuria) and Syntax Score in Non-Diabetic Chronic Kidney Disease Patients

Mohamed Abdel Ghany, Mena Wageeb, Salwa Roshdy
Assuit University, Assut, Egypt

Background: Chronic kidney disease (CKD) is highly prevalent with significant morbidity and mortality rates among patients with coronary artery disease (CAD). The SYNTAX Score (Synergy Between Percutaneous Coronary Intervention With TAXUS and Cardiac Surgery) predicts the outcomes of patients undergoing percutaneous coronary intervention. Our aim was to evaluate the correlation between CKD and severity of coronary artery stenosis by calculating SYNTAX Score in non diabetic CKD patients.

Methods: SYNTAX Score was calculated for 180 non diabetic patients with CKD scheduled for coronary angiography. Serum creatinine and 24 hour proteinuria prior to invasive coronary angiography (ICA) were assessed in all patients. Patients were divided into 2 groups according to their estimated glomerular filtration rate, (group 1 with eGFR ≥15 to < 30 ml/min per 1.73 m²) and (group 2 with eGFR ≥ 30 ml/min per 1.73 m²).

Results: coronary arteries lesions complexity increased progressively with decreasing kidney function as there were significant negative correlation between e-GFR and SYNTAX Score ($r = -0.5$, $P = 0.0004$) and significant positive correlation between 24 hr proteinuria and SYNTAX Score ($r = 0.6$, $p = 0.0001$). A multivariate regression analysis was performed for the predictors of the SYNTAX Score, including age and e-GFR. In this analysis, e-GFR ($\beta = -0.098$, $p = 0.01$) and age ($\beta = 0.35$, $p = 0.001$) were both independent predictors of higher Syntax Score

Conclusion: Serum creatinine, estimated glomerular filtration rate and 24 hours proteinuria were predictors of higher SYNTAX Score.

CRT-143

The Two Current Approaches to Thread Stent for Performing the Szabo Technique: Problems Related with Each Approach, and a Proposal of Stent Designed to Decrease Complications

Raúl Valdesuso, II,¹ Juan Ramon Gimeno,² Francisco Javier Lacunza,²
Julio Antonio Rodríguez,³ Raul Cecilio Rodríguez,⁴ Hector Alberto Fleites,⁵
Albert Torunchá⁶

¹IDC Salud Albacete, Albacete, Spain; ²Hospital Virgen de la Arrixaca, Murcia, Spain; ³Hospital Comarcal de Hellín, Albacete, Spain; ⁴Hospital Virgen de la Montaña, Cáceres, Spain; ⁵Clínica La Milagrosa, Madrid, Spain; ⁶Assuta Medical Center, Tel Aviv, Israel

Background: Stenting ostial and/or bifurcated lesions (L) constitute always a challenge. Szabo Technique (SzT) is a simple way to deal with these problems, but Stent can be damaged during the process increasing nonfatal complication (NFC).

Methods: From Jan'08 to May'13. SzT was attempted in 266 patients (pts) (65 ± 5 years; 68% male). Different brand of stents were used. Before pre-dilating the target L, an "Anchor Guide Wire" (AGW) is placed into "non-stenotic" side branch, and Its proximal stiff tip is attempted crossing through the proximal Stent's cell, by 2 Types of approaches (Tyapps): (Type I) inflating Stent's balloon to lifting up its proximal crown (rest of stent is keeping inside its protective sheath); (Type II) by bending the Stent (looking for "fish flake effect") attempting to separate its proximal cell from balloon.

Results: A total of 283 L (82% by transradial approach) were attempt with SzT. Guide Catheter (GC) Fr used (%) were: 6F: 17; Sheathless GC, 6.5 Fr: 26; 7Fr GC: 28 and Sheathless 7.5 GC: 29. Total Stent used 291. Total Stent Implanted by SzTc: 268 (92%) Mean stent length and diameter was 13.47 ± 5.2 mm and 2.77 ± 1.14 mm. Tyapps used were (%): 43 Type I and 57 Type II. Failure of Stent delivery was due to: puncture of Stent's balloon: 3 (13%) (all in Tyapps II), stent dislodgment 7 (30%) (6 in Tyapps I); Stent non eligible due to deformation by any Tyapps: 5 (22%); others causes (guide wire twisting, failure of reaching the L, etc): 8 (33%). In all SzT failure, procedure was successfully ended with any other stenting technique without NFC.

Conclusions: SzT is highly successful technique, but both Tyapps for Stent threading involves risk of Stent damage (5% in our series), that cause decreasing its rate of success delivery and increasing NFC.

SzT is highly successful technique, but both Tyapps for Stent threading involves risk of Stent damage (5% in our series), that cause decreasing of its delivery success rate and increasing of NFC. Due to these results, we designed with Hexacath (Paris France) one Stent with a dedicated cell (coming from factory), to simplify the threading of AGW, avoiding balloon puncture or Stent deformation. Our Stent called Titan V, has been successfully implanted in test benches and animal models and currently is under evaluation for CE mark.

CRT-144

Comparison of Rotational Atherectomy Versus Cutting Balloon Angioplasty Followed by Stent Implantation for the Treatment of Native De Novo Lesions

Wenjie Tian, Rebecca Torguson, Alfazir Omar, Hideaki Ota, Fang Cheng, Joshua Lob, Lakshmana Pendyala, Marco De Magalhaes Pereira, Nevin Baker, Ricardo Escarcega Alarcon, Saar Minha, Lowell Satler, Augusto Picbard, Ron Waksman
MedStar Heart Institute, Washington, DC

Background: Limited information is available on the clinical outcome differences between rotational atherectomy (ROTA) and cutting balloon angioplasty (CA) followed by stents implantation.

Methods: Clinical data of 986 patients with native de novo coronary lesions who underwent ROTA (n=413) or CA (573) followed by stent implantation from 2003-2013 were retrospectively analyzed. The occurrence of major adverse cardiac events (MACE), defined as all-cause death, myocardial infarction (MI) or target lesion revascularization (TLR) were compared between the two groups at 6 months, 1 and 2 years.

Results: Baseline clinical and procedural characteristics were similar between the two groups, except for greater age (71.7±10.6 vs. 67.6±11.2 years, $p < 0.01$), higher prevalence of type C lesion (54.6% vs. 37.8%, $p < 0.01$), greater length (20.8±6.5 vs. 18.9 ± 6.6mm, $p < 0.01$) and number of stents (1.7±1.0 vs. 1.4±0.9, $p < 0.01$) in the ROTA group. The rate of procedure success (98.0% vs. 98.6%, $p = 0.516$) and DES

implantation (90.0% vs. 89.4%, $p=0.659$) were similar between two groups. There was no difference in MACE rate and occurrence of stent thrombus between the two groups ($p=NS$), however, higher all-cause death rate in the ROTA group at 6 months, 1 and 2 years ($p<0.05$).

Conclusions: ROTA was used in patients with more lesion complexity. However, the MACE rate was comparable between ROTA and CA at 6 months, 1 and 2 years.

Clinical events	Cutting balloon (n=573)	Rotational atherectomy (n=413)	p value
In-hospital Death/ QWMI/CABG	1.4%	2.0%	0.516
6 month			
All-cause death (%)	2.7	7.1	0.007
MI (%)	1.8	1.1	0.747
TLR (%)	4.0	2.6	0.307
Definite ST (%)	0.5	1.1	0.654
Composite MACE	6.5	9.2	0.184
1 year			
All-cause death (%)	4.7	10.3	0.007
MI (%)	2.6	2.0	0.665
TLR (%)	6.3	4.9	0.454
Definite ST (%)	0.6	1.0	0.655
Composite MACE (%)	10.6	14.5	0.145
2 year			
All-cause death (%)	9.1	15.7	0.025
MI (%)	4.5	3.2	0.499
TLR (%)	10.3	8.4	0.496
Definite ST (%)	0.7	1.4	0.655
Composite MACE (%)	18.2	22.8	0.205

MI: Myocardial infarction; QWMI: Q-wave myocardial infarction; CABG: Coronary artery bypass grafting; TLR: Target lesion revascularization; ST: Stent thrombus; MACE: Major adverse cardiac events.

CRT-145

Clinical Impact of Diabetes Mellitus on Long-term Clinical Outcomes in Patients Treated with Everolimus-Eluting Stent for Multivessel Percutaneous Coronary Intervention

Lakshmana Pendyala, Joshua Lob, Al F. Omar, Sa'ar Minha, Marco DeMagalhaesPereira, Hideaki Ota, Nevin Baker, Ricardo EscarregaAlarcon, Radhika Gadesam, Rebecca Torguson, Lowell Satler, Augusto Pichard, Ron Waksman
MedStar Heart Institute, Washington, DC

Background: Newer generation stents by means of more biocompatible components limiting inflammatory response have led to significant improvement in the cardiovascular outcomes.

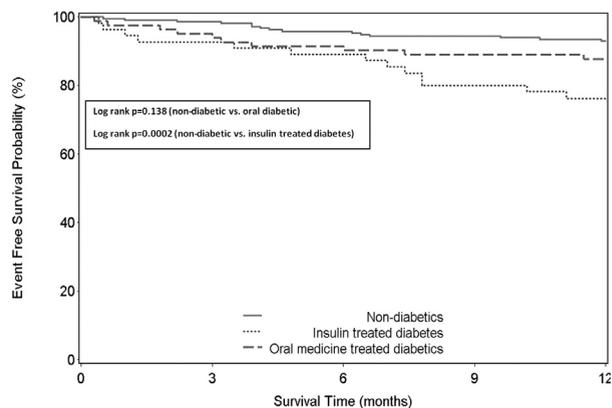
Objective: The purpose of the present study is to evaluate the long term outcomes of diabetic patients undergoing multivessel PCI with the use of everolimus-eluting stent (EES).

Methods: 350 consecutive diabetic patients that underwent multivessel PCI defined as ≥ 2 vessel with EES during the same index procedure were analyzed. Patients were further stratified by the need for insulin ($n=55$) or oral medications only ($n=82$) for control of blood glucose in comparison once that were non-diabetic ($n=214$). Primary end point (MACE) was the combined incidence of death, and non-fatal Q-wave myocardial and target vessel revascularization (TVR) at one year.

Results: Diabetic group had more African-Americans, and higher hypertension, renal failure and higher body mass index compared to non-diabetics. At 1 year there was no difference in rates of MACE, between the non-diabetics and oral diabetics (7% vs. 12%, $p=0.15$) but the MACE rates were higher in insulin treated diabetics compared to non-diabetics (24% vs. 7%, $p<0.001$). Similar trends were noted with TVR, with no difference between non-diabetics and oral diabetics (4.3% vs. 10%, $p=0.09$) but significantly higher TVR rate in the insulin group compared to non-diabetics (20% vs.

4.3%, $p<0.001$). There were no differences in the over-all mortality and no cases of definitive stent thrombosis were noted in the entire cohort at 1 year.

Conclusions: Despite the higher risk nature of multivessel intervention in diabetic patients, with the use of newer generation EES stents, the event rates at one year in oral-diabetics were similar to the non-diabetic population. But patients with insulin treated diabetes continue to be a challenging population.



Coronary

CRT-146

Coronary Heart Disease and Genetic Polymorphisms; Clinical, Angiographic, Procedure Technique and Long-Term Follow-Up Evaluation Post Percutaneous Coronary Intervention; Major Events and Restenosis

Ivana Borges,¹ Rosemaria Andrade,¹ Edison Peixoto,² Rodrigo Peixoto,³ Ricardo Peixoto⁴
¹Polícia Militar do Estado do Rio de Janeiro - Governo do Estado, Rio de Janeiro, Brazil;
²Universidade Federal Fluminense, Rio de Janeiro, Brazil; ³National Institute of Cardiology, Rio de Janeiro, Brazil; ⁴Aloysio de Castro State Institute of Cardiology, Rio de Janeiro, Brazil

Background: There are clinic and genetic polymorphism differences in coronary artery disease (CHD). Percutaneous coronary intervention (PCI), clinic, angiographic, procedure technique may influence the evolution, major events (death, AMI, revascularization) and clinical restenosis. This study aims to evaluate if there are genetic polymorphism differences between patients with and without CHD and if it would influence in long-term follow-up after PCI.

Method and Results: It was studied two groups: the coronary disease group (CDG) with 182 patients of a closed health system with CHD that were submitted to PCI from 2001 and 2007 and to genetic follow-up evaluation until 12/31/2008; the control group (CG) with 36 patients, were angiographically normal and were also submitted to genetic evaluation. The polymorphisms evaluated were the ACE I/D and A166C (AT1R). In this period 221 procedures were performed in 182 patients of CDG. Qui square, Fisher exact and Student t test were used. Cox multivariate regression analysis were not performed because only three clinical characteristics and A166C had $p<0.10$ in univariable analysis.

The CG and CDG patients were: female 20 (55.6%) and 49 (26.9%), ($P=0.0007$); age 55.9 ± 11.1 and 60.8 ± 10.5 ($P=0.0100$); tobacco smokers 5 (13.9%) and 67 (36.8%), ($P=0.0132$); diabetes 4 (11.1%) and 48 (26.4%), ($P=0.0802$); hypertension 29 (80.6%) and 146 (80.2%), ($P=0.9631$); dyslipidemia 14 (38.9%) and 112 (61.5%), ($P=0.0119$); family history 12 (33.3%) and 60 (33.0%), ($P=0.9659$); obesity 9 (25.0%) and 60 (33.0%), ($P=0.3476$); ACE polymorphism DD 16 (44.5%), DI 17 (47.2%), II 3 (8.3%) and DD 81 (44.5%), DI 70 (38.5%), II 31 (17.0%), ($P=0.3612$); A166C