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Drug Eluting Stents In Female Diabetic Patients With Acute Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention

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Background: The aim of study was to compare different coronary stents used during primary percutaneous coronary intervention (PCI) in female patient with acute myocardial infarction (AMI) and diabetes mellitus (DM).
Methods: We selected 1799 consecutive AMI female patients (68.9±10.2) with DM undergoing primary PCI and divided them into 5 groups based on the types of drug eluting stents implanted. Sirolimus-eluting stent (SES), Paclitaxel-eluting stent (PES), Everolimus-eluting stent (EES), Biolimus-eluting stent (BES), Zotarolimus-eluting stent (ZES). Study end point was 12-month major adverse cardiac events (MACE), a composite of death, fatal and nonfatal myocardial infarction and target vessel revascularization.
Results: Mean Hemoglobin A1c level of SES, PES, EES, BES, ZES was 7.7 ± 1.1%, 7.8 ±1.3%, 7.8 ± 1.1%, 7.6 ± 1.2%, and 7.7 ± 1.2% respectively (p=0.195). 928 patients (51.6%) patients prescribed oral hypoglycemic agents (OHA) and 871 patients prescribed OHA and insulin both.Ejection fraction, systolic blood pressure were no significant difference in five groups. The incidence of 12-month MACE in SES, PES, EES, BES, ZES was 8.3%, 8.9%, 4.2%, 4.5%, and 5.2%, respectively (p=0.02). Kaplan Meier analysis show significant difference between SES and BES (p=0.046), SES and EES (p=0.025), PES and BES (p=0.021), PES and ZES (p=0.039), PES and EES (p=0.011). Independent predictors of one-year MACE were family history (OR 17.06, 95% CI 8.412-34.61, p< 0.001), serum glucose level(OR 0.304, 95% CI 0.140-0.661, p=0.024), serum creatine level (OR 3.933, 95% CI 1.194-12.96, p=0.024).
Conclusions: In female patient with AMI and DM, EES and BES would be better therapeutic option than SES and PES for one-year follow up and this result warranted further long-term follow-up.

TCT-54

Additive Prognostic Value Of The Global Registry Of Acute Coronary Events Score Over Other Risk Scores For In-Hospital Outcome Prediction In Patients Presenting With ST-Elevation Myocardial Infarction Treated With Primary Percutaneous Coronary Intervention

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Background: Risk stratification is of utmost importance in patients with ST-elevation myocardial infarction (STEMI) treated with primary percutaneous coronary intervention (pPCI). We aimed to compare different risk scores to evaluate their predictive power towards in-hospital outcomes.
Methods: In 241 consecutive STEMI patients referred for pPCI, the GRACE, TIMI, Zwolle, CADILLAC, PAMI, SYNTAX, and residual SYNTAX (rSS) scores were calculated. The endpoints of this study were in-hospital death, major adverse cardiac events (MACE: death, recurrent myocardial infarction and urgent revascularization) and major adverse events (MAE: MACE, heart failure, stroke, acute kidney injury and major bleeding). The C-statistic was utilized for comparisons.
Results: Mean age was 62.2±12.6 years, 77.2% were male and 16.2% diabetics. Mean ejection fraction was 47.8±9.6%. The culprit lesion was the LAD in 38.6% and 44.4% had multivessel disease. All scores were significantly associated with the 3 outcomes on univariate analysis, except the rSS (with death, MACE and MAE). As shown in the Table, the GRACE score showed the highest C-statistic for all endpoints: death (0.8866, 95% CI: 0.8058 to 0.9674), MACE (0.8168; 95% CI: 0.7078 to 0.9258) and MAE (0.7922, 95% CI: 0.7151 to 0.8693). The GRACE score significantly outperformed the other 6 scores for all 3 endpoints (except the Zwolle and CADILLAC risk scores for MAE).

	C-statistic	95% confidence interval of C-statistic	Comparison with GRACE (difference in C-statistic)	p for comparison with GRACE
Death				
GRACE	0.8866	0.8058 to 0.9674	–	–
TIMI	0.7448	0.5791 to 0.9105	-0.1418 (-0.2389 to -0.0447)	0.0042
Zwolle	0.7979	0.6562 to 0.9397	-0.0886 (-0.1648 to -0.0124)	0.0226
CADILLAC	0.6643	0.4967 to 0.8319	-0.2223 (-0.3597 to -0.0848)	0.0015
PAMI	0.7561	0.6221 to 0.8902	-0.1305 (-0.2124 to -0.0485)	0.0018
SYNTAX	0.7076	0.5515 to 0.8636	-0.1790 (-0.3097 to -0.0483)	0.0073
Residual SYNTAX	0.4718	0.2971 to 0.6465	-0.4147 (-0.5877 to -0.2618)	<0.0001
MACE				
GRACE	0.8168	0.7078 to 0.9258	–	–
TIMI	0.6984	0.5651 to 0.8318	-0.1184 (-0.1997 to -0.0370)	0.0043
Zwolle	0.7472	0.6168 to 0.8776	-0.0696 (-0.1386 to -0.0006)	0.0481
CADILLAC	0.6672	0.5344 to 0.8001	-0.1496 (-0.2657 to -0.0334)	0.0116
PAMI	0.7256	0.6048 to 0.8466	-0.0912 (-0.1769 to -0.0055)	0.0371
SYNTAX	0.6889	0.5623 to 0.8156	-0.1278 (-0.2523 to -0.0034)	0.0441
Residual SYNTAX	0.4965	0.3556 to 0.6374	-0.3203 (-0.4636 to -0.1769)	<0.0001
MAE				
GRACE	0.7922	0.7151 to 0.8693	–	–
TIMI	0.6900	0.5983 to 0.7818	-0.1021 (-0.1619 to -0.0424)	0.0008
Zwolle	0.7462	0.6602 to 0.8323	-0.0459 (-0.0973 to 0.0054)	0.0797
CADILLAC	0.7324	0.6460 to 0.8188	-0.0597 (-0.1509 to 0.0314)	0.1989
PAMI	0.7026	0.6191 to 0.7861	-0.0896 (-0.1545 to -0.0246)	0.0069
SYNTAX	0.6949	0.6049 to 0.7848	-0.0973 (-0.1938 to -0.0008)	0.0482
Residual SYNTAX	0.5622	0.4608 to 0.6638	-0.2300 (-0.3467 to -0.1132)	0.0001

Conclusions: In a contemporary population of STEMI patients treated with pPCI, the GRACE score was the best predictor of in-hospital death, MACE and MAE.

TCT-55

Has PRAMI Changed Practice? An International Survey of Approaches to the Management of Non-Culprit Lesions in Patients Undergoing Primary Percutaneous Coronary Intervention (PCI) for ST-Elevation Myocardial Infarction (STEMI)

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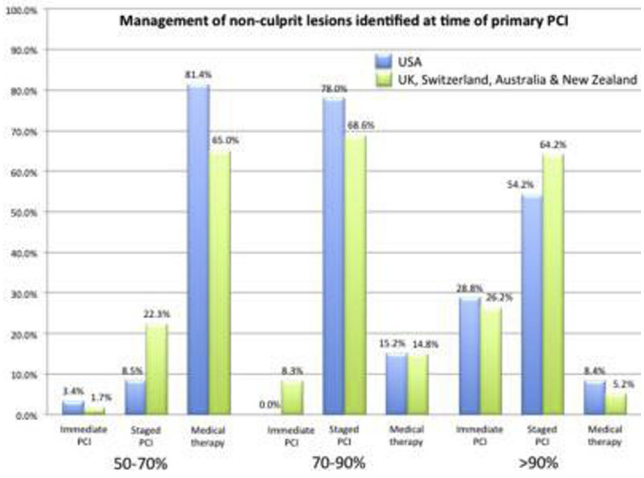
Background: The recent PRAMI trial has shown that in patients with STEMI, immediate preventive PCI to non-culprit lesions reduced the risk of major adverse cardiovascular events (MACE). We conducted an online survey to assess current approaches and to determine whether the PRAMI results are being translated into clinical practice.
Methods: Email invitations to participate in a SurveyMonkey® questionnaire were sent to interventional cardiologists in the United Kingdom (UK), United States of America (USA), Switzerland and Australia and New Zealand (ANZ).
Results: Of the 288 responses, 146 (50.7%) were from the UK, 59 (20.5%) from USA, 39 (13.6%) from Switzerland, and 44 (15.2%) from ANZ. The majority of respondents opted for medical therapy for lesions of 50-70% severity (n=196, 76.1%) and staged PCI for lesions of 70-90% severity (n=203, 76.6%). In patients with >90% stenosis, 28.2% (n=77) opted for immediate PCI and 65.6% (n=179) for staged PCI. Respondents most frequently opted to perform staged PCI during the index admission for stenoses of >90% severity (n=121, 47.8%) and to delay it for 4-6 weeks for other lesion severities (n=192, 43.7%). Most respondents were either uncertain that immediate preventive PCI prevents MACE (n=119, 41.3%) or did not believe that it does (n=125, 43.4%).



Conclusions: Only a minority of interventional cardiologists are persuaded that preventive PCI reduces the risk of MACE. Furthermore, most would perform staged rather than immediate PCI. Further studies are required to confirm or refute the PRAMI results and to address the optimal timing of PCI to non-culprit lesions.

TCT-56

Correlation Between Residual Platelet Reactivity After Clopidogrel Loading And Long Term Major Adverse Outcome Among STEMI Patients Undergoing Delayed Primary Percutaneous Coronary Intervention

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Background: It has been shown that higher Residual Platelet Reactivity RPR (P2Y12-Reaction-Units,PRU>251.5) after clopidogrel loading is associated with larger intracoronary thrombus burden, as well as with impaired myocardial perfusion