CONCLUSIONS: Sub-optimal TIMI flow is of greater prognostic value in DP compared to N-DF, stressing the importance of optimal reperfusion after primary PCI for STEMI in DM.

TCT-345
Effect of Body Mass Index and Diabetes Mellitus on Angiographic Outcomes in Patients Undergoing Primary Percutaneous Coronary Intervention Using Different Drug-eluting Stents

Seiji Habara 1, Kazushige Kadota 1, Tahei Ichinohe 1, Shunsuke Kubo 1, Masatomo Oyaki 1, Yasuke Hyodo 1, Koichi Miyake 1, Naoki Saito 1, Suguru Otsuru 1, Hideaki Otsuji 1, Daisuke Hasegawa 1, Yoshikazu Shigemoto 1, Takeshi Tada 1, Hiroshi Tanaka 1, Yasushi Fuku 1, Tsuyoshi Goto 1, Kazuaki Mitsudo 1
1Kurashiki Central Hospital, Kurashiki, Japan

Background: The purpose of this study was to assess the impact of body mass index (BMI) and diabetes mellitus (DM) on angiographic outcomes in patients treated with different drug-eluting stents.

Methods: From November 2002 to March 2011, 8567 de novo coronary lesions were treated with drug-eluting stent. Dialysis patients were excluded. Of 8567 lesions, 1934 lesions were treated with everolimus-eluting stent (EES), 1215 with sirolimus-eluting stent (SES). Angiographic follow-up was routinely performed at 8 months after successful procedure. The follow-up rate was 81%. The patients were classified as underweight (BMI > 20), normal weight (BMI 20 to 25), and overweight (BMI > 25). The patients were divided into three groups according to implanted stent type: EES, PES, and SES. Of all patients, 42% were with DM, of whom 11% were insulin-dependent. The rates of DM and insulin treatment were similar in all groups. Angiographic outcomes were compared between each group.

Results: Independent predictors of binary restenosis differed in each group. In the SES group, they were BMI (depression of 5 kg/m2), DM, and stent size 2.5 mm. In the EES group, they were CTO, stent size 2.5 mm, and lesion length ≥ 20 mm. In the PES group, BMI (depression of 5 kg/m2), DM, and stent size 2.5 mm. In the SES group, they were BMI (depression of 5 kg/m2), DM, and stent size 2.5 mm. In the EES group, they were CTO, stent size 2.5 mm, and lesion length ≥ 20 mm. The figure shows odds ratio of BMI (depression of 5 kg/m2) and DM between each group.

Predictors of Binary Restenosis

<table>
<thead>
<tr>
<th>Stent Type</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI (depression of 5 kg/m2)</td>
<td>1.27 (1.07-1.51)</td>
<td>2.04 (1.64-2.54)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>1.34 (1.01-1.77)</td>
<td>1.89 (1.52-2.37)</td>
</tr>
<tr>
<td>Pacitaxel-eluting stent</td>
<td>0.95 (0.66-1.33)</td>
<td>1.13 (0.73-1.75)</td>
</tr>
</tbody>
</table>

Conclusions: BMI and DM affect angiographic outcomes in patients treated with SES and PES but not those in patients treated with EES.

TCT-346
Clinical Impact of Five-month Follow-up Glycosylated Hemoglobin on Cardiovascular Outcomes in Diabetic Patients with ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention

Jinhee Ahn 1, Kwang Soo Cha 1, Jeong Cheom Choi 1, Jung Hyun Choi 1, Jong Hyun Choi 1, Taeck Jong Hong 1, Hye Yoon Jung 1, Han Cheol Lee 1, Jun-Hyuk Oh 1
1Pusan National University Hospital, Busan, Korea, Republic of

Background: Diabetes mellitus is known as a strong predictive factor of adverse cardiovascular event after ST-segment elevation myocardial infarction (STEMI). Recently, glycosylated hemoglobin (HbA1c) reflecting serum glucose control within 8 to 12 weeks, is studied to investigate relationship with major adverse cardiac events (MACE) after acute myocardial infarction. This study is conducted to determine the association between follow-up HbA1c and MACE in diabetic patients with STEMI undergoing primary percutaneous coronary intervention (PCI).

Methods: Using data from Korea Working Group on Myocardial Infarction, 303 diabetic patients with STEMI undergoing primary PCI were enrolled. Patients were divided into three groups based on follow-up HbA1c (FU-HbA1c): optimal, FU-HbA1c > 7.0%; suboptimal, 7.0% ≤ FU-HbA1c < 9.0%; poor controlled group, 9.0% ≤ FU-HbA1c. We analyzed 12-month cumulative MACE, defined as a composite of mortality, nonfatal myocardial infarction, re-PCI or coronary artery bypass graft in each group. Also, we investigated the value of FU-HbA1c to predict MACE using multivariable logistic regression analysis.

Results: The mean duration of FU-HbA1c and clinical event follow-up was 5 and 12 months, respectively. The incidence rate of 12-month cumulative MACE were significantly different in each group: 7.3% vs 13.0% vs 23.9%, respectively (p < 0.005), which was mainly due to increased repeated PCI. In multivariable logistic analysis, the factor of FU-HbA1c more than 9.0% was shown to be independently associated with 12-month cumulative MACE, and compared with FU-HbA1c < 7.0%: OR 7.920; 95% confidence interval 1.70-76.522, p = 0.012.

Conclusions: This study suggests that FU-HbA1c in early phase was associated with higher incidence of 12-month cumulative MACE, mainly contributing to increased repeated PCI in diabetic patients with STEMI undergoing primary PCI. And more than 9% of FU-HbA1c was identified to be an independent predictor of adverse outcome. These imply continuous tight monitoring of serum glucose in early phase after myocardial ischemic insult is important to reduce the possibility of repeated PCI following restenosis, but more research is needed to understand these findings with long-term clinical data.

TCT-347
Clinical Outcome Of Biolimus-Eluting Versus Sirolimus-Eluting Coronary Stent Implantation In Patients With And Without Diabetes Mellitus: A SORT OUT V Substudy

Michael Maeng 1, Eoval Christiansen 2, Hans-Henrik Tilsted 1, Jan Ravnkilde 1, Per Thayssen 1, Lisette Jensen 1, Morten Madsen 2, Lars Kruelz 1, Hans Erik Bokker 1, Leif Thayssen 1, Jens Flersted Lassen 1
1Aarhus University Hospital, Aarhus, Denmark, 2Department of Cardiology, Aarhus University Hospital, Skejby, Aarhus N, Denmark, 3Aarhus University Hospital, Aalborg, Aalborg, Denmark, 4Department of Cardiology, Odense University Hospital, Odense, Denmark, 5Aarhus University Hospital, Skejby, Aarhus, Denmark, 6Aarhus University Hospital, Skejby, Aarhus N, Denmark, 7Department of Cardiology, Aarhus University Hospital, Skejby, Aarhus, Denmark, 8Aarhus University Hospital, Aarhus, Denmark

Background: Diabetes is associated with an increased risk of major adverse cardiac events (MACE) following percutaneous coronary intervention.

Methods: We compared clinical outcomes in patients with and without diabetes mellitus treated with the third-generation biolimus-eluting Nobori stent (BES) or the first-generation sirolimus-eluting Cypher™ Select + stent (SES) in the SORT OUT V trial. We randomized 2,468 patients to treatment with SES (n = 1,229, diabetes: n = 185) or SES (n = 1,239, diabetics: n = 189) and followed them for 12 months. Randomization was stratified by presence/absence of diabetes. The primary endpoint was MACE, defined as a composite of cardiac death, myocardial infarction (MI), or target vessel revascularization (TVR). Secondary endpoints were each of these individual endpoints plus all-cause mortality, target lesion revascularization (TLR), and definite stent thrombosis.

Results: In diabetic patients, use of BES compared with SES was neither associated with an increased risk of MACE (6.6% vs. 8.0%; hazard ratio (HR) = 0.83, 95% confidence interval (CI): 0.39-1.77), MI (1.6% vs. 1.6%, HR = 1.02, 95% CI: 0.21-9.08), TVR (5.9% vs. 4.8%; HR = 1.27, 95% CI: 0.52-3.05), nor TLR (5.4% vs. 3.2%; HR = 1.72, 95% CI: 0.93-3.14). Similarly, patients with diabetes, MACE (5.1% vs. 3.7%; hazard ratio (HR) = 1.38, 95% CI: 0.91-2.08), MI (1.4% vs. 0.8%, HR = 1.89, 95% CI: 0.80-4.74), TVR (3.8% vs. 2.8%; HR = 1.40, 95% CI: 0.87-2.25), and TLR (2.8% vs. 1.8%; HR = 1.55, 95% CI: 0.87-2.76) showed no differences between the two stents. With regard to stent thrombosis, BES was neither associated with fewer events in patients with diabetes (2.2% vs. 1.2%; HR = 2.05, 95% CI: 0.38-11.2) nor in patients without diabetes (0.66% vs. 0.2%; HR = 3.03, 95% CI: 0.61-15.0).