P1719
Validity of DAPT score to predict late ischemic and hemorrhagic events in patients with ST-segment-elevation acute coronary syndrome

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Background: DAPT-score (DS) quantifies one year after stenting the risk of late ischemic and major bleeding (MB) events.
Objectives: To assess the validity of DS in patients with ST-elevation myocardial infarction (STEMI).
Methods: Linking data of "Codi-IAM" registry (an exhaustive community-wide cohort of STEMI patients), hospitalization episodes and mortality registries, the rate of acute myocardial infarction (AMI), MB, and death among 7,387 patients who were free from ischemic and MB events at 12 months after stenting, were assessed between 12 and 30 months and compared across DS strata. Event rates were also assessed through total follow up (median 53 months; Q1-Q3 40.7–67.2). DS performance to predict AMI and MB was evaluated by C statistic and goodness-of-fit tests.
Results: See Table. At 30 months mortality rate differed across DS strata (1.83% in the highest DS to 6% in the lowest DS) but not MB and AMI rates. Considering total follow up, a DS $\geq$2 vs DS<2 was associated with higher risk of AMI (HR 1.55; 95% CI 1.18–2.04), lower risk of MB (HR 0.67; 95% CI 0.46–0.98), and lower mortality (HR 0.40; 95% CI 0.33–0.48). After recalibration goodness-of-fit improved for the ischemic model (p=0.056) and for the MB model (p=0.027) but was still suboptimal. Discrimination was modest for the ischemic model (C-statistic 0.59; 95% CI 0.54–0.65) and acceptable for MB model (C-statistic 0.65; 95% CI 0.58–0.72).

Outcomes at 30-month and at final follow up and association with strata of DAPT-score

	30-month follow up			Total follow up	
	Crude incidence rate	HR (95% CI)	p	HR (95% CI)	p
AMI	1.37 (1.13–1.67)				
–1 to 0 (Ref)	1.01 (0.65–1.58)	1		1	
1	1.59 (1.11–2.26)	1.58 (0.89–2.80)	0.12	1.44 (0.94–2.21)	0.096
2	1.36 (1–1.86)	1.43 (0.83–2.46)	0.20	1.55 (1.05–2.3)	0.029
3 to 7	1.85 (1.05–3.23)	1.99 (0.98–4.03)	0.056	3.41 (1.18–5.33)	<0.001
Bleeding event	0.72 (0.55–0.94)				
–1 to 0 (Ref)	0.91 (0.56–1.46)	1		1	
1	0.80 (0.49–1.32)	0.78 (0.40–1.54)	0.48	0.68 (0.42–1.09)	0.11
2	0.45 (0.26–0.78)	0.45 (0.22–0.91)	0.026	0.48 (0.3–0.76)	0.002
3 to 7	1.08 (0.52–2.25)	1.06 (0.45–2.53)	0.89	0.92 (0.5–1.70)	0.8

AMI: Acute Myocardial Infarction.

Conclusions: In patients with STEMI DS is associated with AMI, MB and mortality beyond 12 months after stenting, but its global performance is modest and its clinical utility might be questionable.
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P1720
DAPT and PRECISE DAPT scores in identifying patients at high bleeding risk after percutaneous coronary intervention

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Background: The optimal duration of dual anti-platelet therapy (DAPT) remains debatable and depends on the bleeding/thrombosis risk ratio. DAPT and PRECISE DAPT score were developed to identify high bleeding risk patients after percutaneous coronary intervention (PCI).
Aims: We aimed to determine the prevalence of patients at higher bleeding risk after PCI using both DAPT and PRECISE DAPT scores, and to assess the discordance between these two scores.
Methods: We performed a single center prospective study including consecutive patients who underwent PCI from Mars to September 2017. Patients were subdivided in 2 groups: stable coronary artery disease (SCAD) and acute coronary syndromes (ACS). DAPT and PRECISE scores were calculated. High bleeding risk patients were defined by DAPT score <2 or PRECISE DAPT $\geq$25.
Results: A total of 305 patients were enrolled into the study [SCAD (n=103, 33.8%), ACS (n=202, 66.2%). The mean age was 62±10.7 years, and 79.7% were males. The mean DAPT and PRECISE DAPT scores were 1.85±1.29 and 17.4±10.9, respectively. The prevalence of high bleeding ris k was 39.7% and 23.3% according to DAPT and PRECISE DAPT scores, respectively. ACS patients had higher DAPT score (2.1±1.2 vs. 1.33±0.98; p<0.001) and lower PRECISE DAPT score (16.1±10.5 vs. 20.1±11.1; p<0.001) in comparison with SCAD patients. The prevalence of high bleeding risk patients were higher in SCAD group than in ACS group as assessed by both DAPT and PRECISE DAPT scores [(57.3% vs. 30.7%; p<0.001) and (34% vs. 17.4%; p=0.002), respectively]. The two scores were discordant in 90 (29.5%) patients [32 in SCAD (31.1%) and 58 in SCA (28.7%)].
Conclusions: Despite some discordance between the two scores, both DAPT and DAPT PRECISE scores showed increased prevalence of high bleeding risk patients in SCAD in comparison with ACS patients.

P1721
Bleeding complications, before and after introduction of ticagrelor, in real-life patients with ST-segment elevation myocardial infarction

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Background: The P2Y12-receptor inhibitor ticagrelor proved better after an acute coronary syndrome in the PLATO trial, with lower rate of the combination of MI, CV death or stroke, compared to clopidogrel, without apparent increase in bleedings. However, there is a paucity of real-life data reflecting daily clinical practice, including older patients with more comorbid conditions. The aim of this study was to assess incidence of non-CABG bleeding complications, before and after introduction of ticagrelor.
Methods: In the county of Östergötland, Sweden, a clopidogrel based strategy was changed to a ticagrelor based strategy in patients with ST-elevation MI (STEMI) on the 1st of Nov 2011. From the local SWEDEHEART registry we included 660 consecutive patients (330 before and 330 after the change in strategy), diagnosed with a STEMI. Medical records were scrutinised for bleeding complications and ischemic outcomes. We report bleeding complications classified according to two established definitions (TIMI and BARC). All patients were followed over six months.
Results: There were no differences in age (69y vs 69y), sex (31 vs 32% females), hypertension, diabetes, previous MI, previous revascularisation, history of bleeding incidence, CRUSADE bleeding score, invasive treatment (99% in both groups) or discharge treatment with aspirin (98% vs 97%, p=0.31) or warfarin (11% vs 9%, p=0.08) between groups. During hospital stay there was a higher use of abciximab (72% vs 19%, p<0.001) and lower use of tirofiban (0 vs 34%, p<0.001) and bivalirudin (0 vs 24%, p<0.001) during the clopidogrel based period compared to the ticagrelor based period. At discharge more patients were treated with clopidogrel before the change in treatment strategy (90% vs 21%, p<0.001) and more patients were treated with ticagrelor after the change in treatment strategy (74% vs 1%, p<0.001).
During hospital stay there was no significant difference in any TIMI or BARC bleedings.
In contrast, after discharge there were twice as many bleeding complications after the change to a ticagrelor based strategy (41 (13%) vs. 20 (6.5%), p=0.005). There were also more TIMI major/minor (18 (6%) vs 3 (1%), p=0.001), TIMI major (6 (2%) vs 0 p=0.03), BARC $\geq$2 (31 (10%) vs 11 (4%), p=0.001) and numerically BARC $\geq$3 (8 (2.6%) vs 2 (0.6%), p=0.11) bleedings with a ticagrelor based strategy.
In this cohort, no differences were observed in any of the endpoints death, MI, or stroke.
Conclusion: In STEMI patients, a ticagrelor based strategy significantly increased non-CABG bleeding complications without any apparent change in death, MI or stroke.

P1722
Platelet function monitoring for the prediction of clinical outcomes: a pooled analysis of the randomized ARCTIC and ANTARCTIC trials

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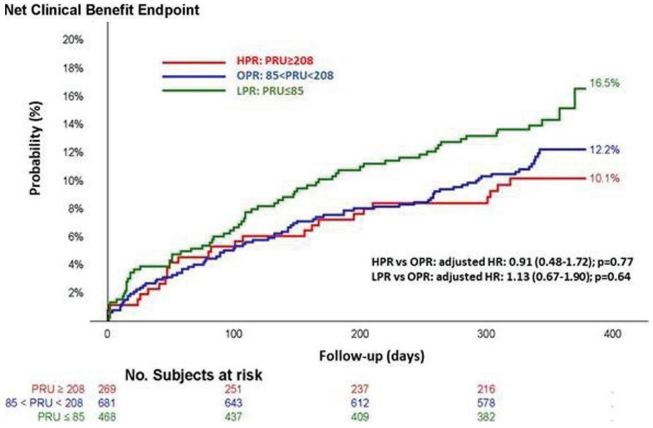
Background: Platelet function monitoring offers the possibility to individualize antiplatelet therapy in coronary artery disease patients but failed to improve clinical outcomes in randomized clinical trials. However, high-on-treatment platelet reactivity (HPR) remains a risk factor for recurrent ischemic events and low-on-treatment platelet reactivity (LPR) is a risk factor for bleeding events.
Methods: We collected data of patients assigned to the monitoring arm of the randomized ARCTIC and ANTARCTIC trials that evaluated the platelet reactivity

by the VerifyNow P2Y12 test two weeks after coronary stenting. HPR was defined by PRU≥208, LPR by PRU≤85 and optimal platelet reactivity (OPR) by 85
Results: Among the 1,418 patients included, HPR was present in 269 patients (18.9%), OPR was reached in 681 patients (48.0%) and LPR in 468 patients (33.0%). The primary composite endpoint occurred in 9.7%, 11.5% and 14.3% respectively. There was no significant difference in the net clinical benefit between HPR and OPR patients (adjusted HR: 0.91; 95% CI: 0.48–1.72; p=0.77) and between LPR and OPR patients (adjusted HR: 1.13; 95% CI: 0.67–1.90; p=0.64) (Figure). There were no differences in the individual clinical endpoints between the three groups. Receiver operating characteristic curve analysis demonstrated that PRU when used for treatment adjustment has a limited ability to discriminate net clinical benefit, ischemic events or bleeding complications (curve – c index=0.55, 0.51 or 0.59, respectively).



Conclusion: Two weeks after stenting, optimal platelet reactivity was obtained in less than half of the population. The net clinical benefit of these patients was not different from that of patients with HPR and LPR who had treatment adjustment.

P1723
When will be appropriate time for P2Y12 inhibitors dose de-escalation?

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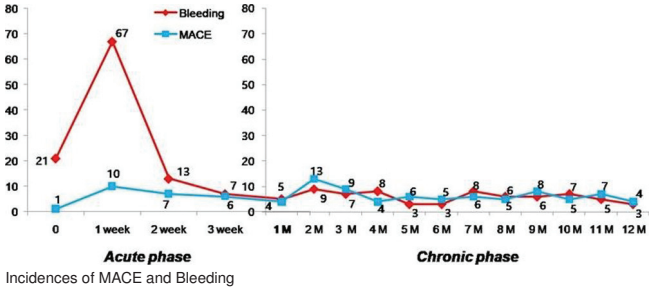
Background: The optimal duration of dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) with drug eluting stents (DESs) is unclear. Because prolonged DAPT is associated with higher bleeding risk and health care costs, establishing optimal DAPT duration is important.
Objectives: We sought to compare patterns of clinical outcomes between short- (1- months) and long-term (1-year) DAPT post-DES placement.
Methods: This study included 903 patients who were admitted with non-ST-elevation or ST-elevation myocardial infarction requiring PCI. 903 consecutive patients were treated with maintenance dose DAPT (75 mg/day clopidogrel, or 10 mg/day prasugrel, or 180 mg/day ticagrelor, all on top of 100 mg aspirin). Major cardiovascular events (MACEs) (all-cause death, myocardial infarction, urgent revascularization, stroke) and major bleeding as defined by the Bleeding Academic Research Consortium (BARC) classification ≥3 were collected at 1-month and 1-year post PCI.
Results: There were a total of 113 (12.5%) 1-month major bleeding and 65 (7.2%) 1-year major bleeding.1-month and 1-year MACEs occurred in 28 (3.1%) and 72 (8.0%) patients respectively. 1-month compared with 1-year DAPT after PCI resulted in strongly increased rates of major bleeding (p<0.001), but there were not significantly different between 1-year major bleeding and MACEs (p=0.53).



Incidences of MACE and Bleeding

Conclusion: Major bleeding rates of DAPT appeared to be higher in short-term duration than in long-term duration. De-escalation strategy of P2Y12 inhibitors could be considered within a month, possibly between 1 to 2-weeks period.

PREDICTION OF ACUTE CORONARY SYNDROMES PROGNOSTICS

P1724
PRESTO score: simple score for early discharge of patients with ST-elevation myocardial infarction treated with primary percutaneous coronary angioplasty

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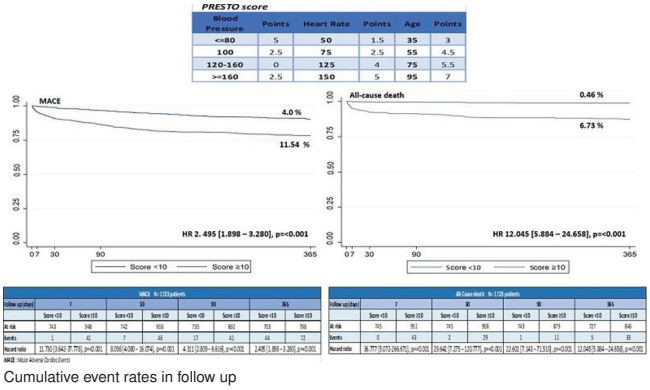
Background: Early discharge (ED) for low-risk patients treated with primary coronary angioplasty is safe and cost-effective. Risk scoring systems for ED recommended in the guidelines are sophisticated and time-consuming for use in daily practice.
Purpose: Develop and validate a simple scoring system using a reduced number of variables to predict major cardiovascular adverse events (MACE) (all-cause mortality, myocardial infarction, and unplanned repeat revascularization).
Methods: All the data of the patients in our register of primary angioplasty enrolled between January 2008 and December 2016 was analyzed and 3 simple clinical variables were selected: age, heart rate (HR), and systolic blood pressure (SBP) upon arriving at cath lab. We developed a logistic model to predict MACE and all-cause mortality at 7 days, 30 days and 365 days, the results were simplified into a score table; patients with <10 points were considered as low-risk and ≥10 points were considered as high risk. Finally, a survival analysis was performed and our new score was compared to the GRACE score (high (≥140), low risk (<140)).
Results: 1723 patients were classified into 2 groups based on the PRESTO score: 745 patients (43.23%) were identified to have a low-risk. The low-risk group was composed by a younger and overweight male population with a higher number of active smokers. Thus, diabetes mellitus and hypertension were significantly higher in the high-risk group. On admission the low-risk group presented with significantly lower Killip class IV, normal left ventricle ejection fraction (LVEF), and a lower GRACE score. The cumulative incidence of MACE and all-cause death was lower in patients with a score <10, as depicted by Kaplan-Meier survival curves. The adjusted risk for MACE and all-cause death was higher in patients with ≥10 points than in patients with <10 points, with a hazard ratio (HR) 11,730 (95% confidence interval [95% CI] 3.642–37.778, p≤0.001) for MACE and for all-cause death HR 36,777 (95% CI 5.072–266.671, p≤0.001) at 7 days follow-up, also being significant to 30, 90 and 365 days. The area under de ROC curve (AUC) of the PRESTO score for predicting MACE was 0.681, with a sensitivity (SE) of 90.2% and a specificity (SP) of 45.9%. The AUC for predicting all-cause death was 0.718 (SE of 98.0% and SP of 45.7%). We compared the ability of our score with the GRACE score for predicting MACE and all-cause death. There were no differences between the GRACE and the PRESTO ROC curves for MACE (p=0.708 at 7 days, p=0.192 at 30 days, p=0.639 at 90 days), but significant differences were found in favor to the proposed model for predicting all-cause death (p=0.005 to 7 days, p≤0.001 to 30 days, p≤0.001 to 90 days).



Cumulative event rates in follow up

Conclusions: The PRESTO score is a simple and accurate tool for identifying low-risk patients for early discharge after primary angioplasty, with a better prediction ability for detecting all-cause death compared to the GRACE score.

P1725
Short and long term prognostic value of admission glycosylated hemoglobin and glucose in nondiabetic patients with acute myocardial infarction

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