high TB group is lower than that of low TB group (14.9% vs. 29.0% for all cause death, P=0.038; 9.5% vs. 27.5% for cardiac death, p=0.006). In a multivariate Cox regression analysis,after adjusted for age, left ventricular ejection fraction (LVEF) et al., the patients had the lower incidence of all cause death and cardiac death in the high TB group than that in the low TB group (OR:0.423, 95%CI 0.184-0.975,p=0.043, vs. OR: 0.281, 95%CI 0.103-0.765, P=0.013, respectively).
Conclusions: Serum high TB level on admission is a protective and independent predictor of long term outcomes among no-reflow patients with STEMI undergoing primary PCI. In addition, TB concentrations may be a novel candidate biomarker for stratification of risk in no reflow patients with STEMI during primary PCI.

Antiplatelet Therapy

CRT-32

Universal Ticagrelor Versus Assay-Driven Antiplatelet Therapy in Acute Coronary Syndrome Patients: A Cost-Effectiveness Analysis

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Background: Assays have been developed to monitor on-P2Y12 platelet reactivity, and these tests can accurately predict which patients will have poor response to clopidogrel. We sought to determine the cost-effectiveness of using a platelet reactivity assay to aid in the selection between ticagrelor and clopidogrel based dual antiplatelet therapy in ACS patients.
Methods: A hybrid decision tree/Markov model was used to calculate 5 year costs (2011 US$), quality adjusted life years (QALYs) and incremental cost-effectiveness ratios (ICERs) of 1 year of platelet reactivity assay-driven ticagrelor (given to patients with high platelet reactivity defined as >230 on the VerifyNow P2Y12 assay, Accumetrics, San Diego, CA, others got generic clopidogrel) or universal (given to all patients) ticagrelor. We assumed a cohort of 65 year old ACS patients and 32% and 13% incidences of high platelet reactivity at discharge and at 1 month. The analysis was conducted from a US payer perspective and used a 1 year cycle length. Data depicting the efficacy and safety of ticagrelor and clopidogrel were taken from multinational randomized trials.
Results: Patients experiencing an acute coronary event treated with ticagrelor or clopidogrel based upon the results of the platelet reactivity assay lived an average of 3.497 QALYs at a treatment cost of $30,615. Those receiving universal ticagrelor lived an average of 3.530 QALYs and incurred costs of $32,865 (ICER for universal ticagrelor= $68,182/QALY). Universal ticagrelor was not cost-effective unless the yearly cost of ticagrelor was <$2,800, the yearly cost of clopidogrel rose above $1,100 or the hazard ratio for death on ticagrelor vs. clopidogrel was <0.74. Monte Carlo simulation suggested universal and platelet reactivity assay-driven selection of ticagrelor would have ICERs<$50,000/QALY (be cost-effective) in 26% and 74% of 10,000 iterations, respectively.
Conclusion: Universal ticagrelor was not cost-effective compared to platelet reactivity assay-driven use of ticagrelor or clopidogrel. In the age of generic clopidogrel, assay-driven selection of antiplatelet therapy appears to be a reasonable strategy to decrease ACS associated healthcare costs.

CRT-33

Peri-procedural CK-MB Levels In Percutaneous Coronary Intervention With High-dose Bolus Tirofiban Vs. Abciximab Plus Either Unfractionated Heparin Or Bivalirudin: An Analysis From TENACITY

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Background: TENACITY was a randomized 2 × 2 factorial trial comparing high-dose bolus (HDB) tirofiban vs. abciximab, and unfractionated heparin (UFH) vs. bivalirudin, in patients undergoing percutaneous coronary intervention (PCI). The primary endpoint of 30-day death, myocardial infarction, or urgent target vessel revascularization occurred in 6.9% and 8.8% of patients randomized to HDB tirofiban and abciximab, respectively. In this analysis, we retrospectively analyzed CK-MB levels in the 4 arms of the study.
Methods: Serial CK-MB samples were obtained in 380 of the 383 enrolled patients.
Results: A non-inferiority analysis with margin of 2 ng/mL was performed using PROC TTEST of SAS version 9.2, with HDB tirofiban and abciximab study arms pooled across levels of UFH and bivalirudin. The non-inferiority of HDB tirofiban vs. abciximab was established from a one-sided test for the difference in peak CK-MB means (p-value = 0.011), with a corresponding 90% confidence interval of (−0.52, 6.86) for abciximab minus HDB tirofiban.

Variable Analyzed	HDB Tirofiban + AT (n=189) (ng/mL)	Abciximab + AT (n=191) (ng/mL)	UFH + GPI (n=195) (ng/mL)	Bivalirudin + GPI (n=185) (ng/mL)
Median Peak CK-MB	2.6	2.6	2.7	2.5
Peak CK-MB Percentile 25-75	1.6-6.4	1.3-5.5	1.3-6.4	1.4-5.6
Median CK-MB from serial draw #1	1.5	1.5	1.6	1.4
Median CK-MB from serial draw #2	1.8	1.8	1.8	1.8
Median CK-MB from serial draw #3	2.1	2.2	2.2	2.1
Median CK-MB from serial draw #4	2.2	2.3	2.3	2.3
Median CK-MB from serial draw #5	2.5	3.1	3.5	2.3

AT=UFH or bivalirudin; GPI=tirofiban or abciximab.

Conclusions: CK-MB levels are similar after the administration of HDB tirofiban and abciximab, and UFH and bivalirudin, in this prematurely terminated, undersized trial. These data do suggest, however, that HDB tirofiban and abciximab, and UFH and bivalirudin, may be similar in their ability to prevent peri-procedural myocardial infarction in moderate to high-risk patients undergoing PCI. These data should be useful in identifying the size of an appropriately powered trial necessary to compare these regimens.

CRT-34

Outcomes Of Anti-platelet Therapy For Acute Coronary Syndromes Patients Directed By Post Pci Platelet Function Testing In A Real World Setting

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Objectives: To assess whether Accumetrix VerifyNow P2Y12 testing directed anti-platelet therapy after acute coronary syndromes (ACS) percutaneous coronary intervention (PCI) in a real world setting, could affect outcomes.
Background: Multiple trials suggest that high residual on-treatment platelet reactivity (HRPR) [Platelet Reactivity Units (PRU) ≥230] increases the incidence of major adverse cardiac events: death, myocardial infarction, target vessel revascularization and stent thrombosis (MACE). Data on routine real world testing of ACS patients is lacking.
Methods: 371 ACS patients had PCI and platelet function testing after initial background aspirin and ≥ 600 mg of clopidogrel. For PRU at 12-24 hours < 230, maintenance 325 mg/day of aspirin and 75 or 150 mg/day of clopidogrel for 1 week then 75 mg/day were continued unless followup testing at 1-3 weeks demonstrated HRPR. Most patients with initial HRPR were switched to prasugrel or ticagrelor with no further testing, as hyporesponse is rare; or clopidogrel 150 mg/day with repeat testing at 1-3 weeks. Continued HRPR on clopidogrel usually drove switching to prasugrel or ticagrelor unless contraindicated.
Results: There were 148 (40%) HRPR and 223 (60%) responders patients. MACE was similar between the two groups [5/148 (3.4%) vs. 6/223 (2.7%), respectively, p=0.76]. Even after subdividing ACS to unstable angina (UA) and Non ST elevation MI