all patients were obtained; adverse events were externally adjudicated by an independent committee. The primary endpoint was target vessel failure (TVF) at 1 year, a composite of cardiac death, target vessel related MI, and clinically indicated target vessel revascularization. Secondary endpoints included all the individual components of the primary endpoint, the incidence of stent thrombosis (ST), and the patient-oriented clinical endpoint (POCE).

Results: Patient and lesion characteristics did not differ between groups with the only exception being higher proportions of severely calcified lesions (87/548 (16%) vs. 108/500 (22%), p=0.02) and stent postdilatation in EES (402/548 (73%) vs. 400/500 (80%), p=0.01). At one year, TVF did not differ significantly between the two stent arms (16/421 (4%) vs. 10/396 (3%), p=0.50). In addition, POCE was 6% (32/542) for ZES and 6% (23/396) for EES (p=0.31). Definite-or-probable ST rates were very low and similar in both groups (2/421 (0.5%) vs. 1/396 (0.3%), p=1.00).

Conclusions: One-year follow-up of DUTCH PEERS patients, who were treated for acute MI, demonstrated excellent clinical results with a similar and sustained safety and efficacy of the Resolute Integrity ZES and the Promus Element EES.

TCT-28

Comparison Of Outcomes For Primary Percutaneous Coronary Intervention During Out Of Working Hours Versus In Working Hours: An Observational Cohort Study Of 11,461 Patients

M Bilal Iqbal,1 Charles D. Ilsley,1 Ghada Mikhail,2 Ramzi Khamis,2 Mark Whitbread,3 Mark Williams,4 Kristen M. Gertz1, Andrew Wragg1

London, United Kingdom

1Royal Brompton & Harefield NHS Trust, London, United Kingdom, 2Barts Health NHS Trust, London, United Kingdom, 3University College London Hospital NHS Foundation Trust, London, United Kingdom, 4St George’s Hospital NHS Trust, London, United Kingdom

Background: Primary percutaneous coronary intervention (PCI) is the treatment of choice for ST-elevation myocardial infarction (STEMI). The optimum delivery of this service requires an integrated, multi-disciplinary, consultant-led, protocol-driven approach. It is widely recognised that resources including availability of medical personnel are limited during out of working hours, particularly at night. Currently, it is unclear whether PCI during working hours is associated with improved outcomes.

Methods: We conducted an observational analysis for 11,461 patients with STEMI who underwent PCI between 2004-2011 at all 8 tertiary cardiac centres in London, UK. The primary outcome was all-cause mortality at 1 year. We defined working hours as 8am-5pm (Mon-Fri). We compared outcomes in patients treated out of working hours (OHW) versus in working hours (IWH). Cox-proportional hazard models built using a stepwise variable selection process were used to determine independent predictors for mortality. We used propensity-based matching methods to adjust for measured confounders; and instrumental variable analyses to adjust for non-measured confounders.

Results: Of the 11,461 patients in the analysis, 7494 patients (65.3%) were treated with PCI during IWH. There was no difference in 1-year mortality rates when comparing PCI during IWH (n=7494) vs. OHW (n=3967, 18.6% vs. 16.8%, p=0.50). Multivariable analysis demonstrated that PCI during OHW was not a predictor for 1-year mortality (HR=1.11, 95% CI: 0.94-1.32, p=0.201). When stratifying OHW into 2-hourly intervals, multivariable analyses demonstrated that there was no particular time interval that was associated with increased mortality. When analysing 5228 patients in propensity-matched cohorts, again, PCI during OHW was not a predictor for 1-year mortality (HR=1.10, 95% CI: 0.90-1.34, p=0.356). Using enrollment year as an instrumental variable, PCI during OHW did not affect mortality (absolute difference=2.1%, 95% CI: 12.6%, 16.8%, p=0.888).

Conclusions: In this observational analysis of unselected STEMI patients, PCI outside routine working hours compared to within routine working hours is safe with no difference in 1-year mortality.

TCT-29

CLINICAL AND ANGIOGRAPHIC PROFILE OF PATIENTS UNDERGOING PRIMARY PCI: DATA FROM FIRST NATIONWIDE REGISTRY

ABDURRAZAK GEHANI,1 SALAH ARAFA1,2, ARAHMAN ARAB1,2, MAGDHIR YACOB1

1HEART HOSPITAL, DOHA, Qatar, 2QCRC, QATAR, DOHA, Qatar

Background: This briefly describes the set up and the preliminary results of the “first Nationwide” 24/7 Primary PCI for ST-Elevation Myocardial Infarction Program in the gulf nation.

Methods: In our center over 3500 diagnostic and 1500 Interventional PCI, including Primary PCI procedures were performed in 2013. With this experience, we proceeded to setup a nationwide Primary PCI program such that all patients with STElevation Myocardial Infarction (STEMI) were referred seamlessly for immediate Primary PCI through coordination of all Cardiology, Emergency and Ambulance services in the whole country, and under one control and command center. Since its establishment, we hereby report 422 patients who underwent Primary PCI in 6 months. The clinical and angiographic data were collected and analyzed.

Results: Primary PCI was performed in 422 patients with STEMI (10 months data will be presented at the conference). The mean age was 50+9.3 years. The program allowed faster and direct transfer of patients to the Primary PCI facility leading very short Door-to-Balloon Time (DBT) of 52.8±25 min (>90% of patients were ≤ 90 min). For those referred from non-Primary PCI facility, 77% had DBT of < 120 min (as stated in the guidelines)(mean of 80±20.7 min). The overall in-hospital mortality for Primary PCI patients was 2.8%. Radial approach was used in nearly half the patients (43.5%) and femoral approach in the other 56.5% with similar DBT for both. More precisely, the time from arrival to Cath lab to Balloon Dilation (procedure time) was similar for both approaches 18.6±8.3 min for femoral) and (17.5±7.2 min for Radial). Overall, less than TIMI III flow (i.e. TIMI 0, 1 or II) was found in 85% of patients before Primary PCI, of these, full TIMI III flow was achieved in 93% of these cases. Achievement of this TIMI III flow was also similar between Femoral and Radial approaches.

Conclusions: This is the first coordinated “Nationwide” Primary PCI program in the gulf region. The data emphasize how good communication allows Primary PCI for all STEMI patients, at a very short DBT and with low in-hospital mortality. Radial and Femoral approaches were used almost equally with similar achievement of TIMI III flow and procedure time.

TCT-30

Clinical Predictors and Long-term Impact of Enzymatic Infarct Size After Primary PCI in STEMI: THE HORIZONS-AMI Trial

Tomotaka Dohi,1 Aiko Maehara,1 Bernhard Witzenbichler,2 Ke Xu3, Melissa Nichols,4 Sorin Brener,5 Roxana Mehran,5 Gary S. Mintz,6 Gregg W. Stone6

1Columbia University Medical Center and the Cardiovascular Research Foundation, New York, NY, 2Catharsis Cardiovascular Research Foundation and Columbia University Medical Center, New York, United States, 3Charité Campus Benjamin Franklin, Berlin, Germany, 4Cardiovascular Research Foundation, New York, NY, 5New York Methodist Hospital, Brooklyn, United States, 6Cath School of Medicine at Mount Sinai, New York, NY, 7Cardiovascular Research Foundation, Washington, United States, 8Columbia University Medical Center and the Cardiovascular Research Foundation, New York, United States

Background: We sought to elucidate: 1) the predictors of enzymatic infarct size assessed by peak CK-MB in pts with ST-segment elevation myocardial infarction (STEMI) undergoing primary PCI (PPCI), and 2) the impact of peak CK-MB on cardiac mortality at 3 years.

Methods: HORIZONS-AMI was a prospective, open-label, multicenter, dual-arm, 2×2 factorial randomized trial in pts with STEMI presenting < 12 hours after symptom onset. The 2 randomization arms consisted of 1) bivalirudin alone vs heparin plus a glycoprotein IIb/IIIa inhibitor; and 2) TAXUS paclitaxel-eluting stents (PES) vs bare metal stents (BMS). We evaluated infarct size according to peak CK-MB ratio (peak-CK-MB/upper limit of normal (ULN)).

Results: Peak CK-MB ratio was available in 3068 of 3345 patients (91.7%). Median peak CK-MB ratio was 13.9 (IQR 5.8 to 32.4). By linear regression, the independent predictors of peak CK-MB ratio were US location (p < 0.0001), LAD culprit location (p < 0.0001), baseline TIMI grade 0/1 flow (p < 0.0001), and post- stent balloon dilatation (p = 0.04). Beta-blocker use before PCI predicted lower peak CK-MB ratio (p = 0.03). In a covariate-adjusted Cox regression model, peak CK-MB ratio was an independent predictor of 3-year cardiac mortality (Table).

Table. Independent Predictors of 3-year Cardiac Mortality

<table>
<thead>
<tr>
<th>Hazard ratio</th>
<th>95% Confidence Interval</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak CK-MB ratio (per 100 ULN)</td>
<td>1.13</td>
<td>1.04 to 1.22</td>
</tr>
<tr>
<td>Age (per 5 years)</td>
<td>1.20</td>
<td>1.09 to 1.31</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>2.18</td>
<td>1.42 to 3.33</td>
</tr>
<tr>
<td>Killip class 2-4</td>
<td>2.45</td>
<td>1.51 to 3.97</td>
</tr>
<tr>
<td>Baseline creatinine (per 0.1 mg/dL)</td>
<td>1.05</td>
<td>1.03 to 1.07</td>
</tr>
<tr>
<td>Bivalirudin use (vs. UFH+GPI)</td>
<td>0.47</td>
<td>0.31 to 0.72</td>
</tr>
<tr>
<td>Acquired thrombocytopenia</td>
<td>1.84</td>
<td>1.19 to 2.87</td>
</tr>
</tbody>
</table>

Conclusions: In this large-scale prospective trial of patients with STEMI undergoing primary PCI, enzymatic infarct size estimated by peak CK-MB ratio was an independent predictor of 3-year cardiac mortality. Further studies are warranted to identify interventions to reduce infarct size after primary PCI.