syndrome (ACS). 25 patients (41%) had triple vessel CAD. Sixty percent were classified as having ACC/AHA B-2 or type coronary arteries including bailout stenting post DEB required in 8 patients %.

Immediate result mean diameter stenosis was 80%±8 decrease to 5%±9 post DEB dilatation and the diameter stenosis reached 15%±20 with coronary angiography follow up at 6 to 12 months. 7 patients (11%) have restenosis (5 patients have PCI and 2 patients have CABG). 37 patients (59%) who were followed by either re-cath (17 patients) or SPECT Scan (20 patients) showed no evidence of restenosis. The remaining 17 patients (30 %) were followed clinically and showed no Angina. One patient died from cancer one month after PCI. Two patients failed because of inability to cross the lesion. There was no cerebrovascular accident and no major bleeding.

**Conclusion:** Be Brown Pacilitaxel-coated balloon (DEB) can be used safely with good and successful intermediate result with target vessel restenosis of 7 patients (11.3) % and non cardiac mortality of 1.6%.

## FFR

## CRT-49

**ABSTRACT WITHDRAWN**

## Left Main Intervention

## CRT-50

### Predictors of In-hospital Outcome after Primary PCI of Left Main Coronary Artery Acute Myocardial Infarction with Cardiogenic Shock

*Koushi Matsuo, Yasunori Ueda*
*Osaka Police Hospital, Osaka, Japan*

**Background:** In patients with acute myocardial infarction (AMI) and cardiogenic shock, emergency revascularization improves long-time survival. However, predictors of in-hospital outcome after primary PCI of left main coronary artery (LMCA) AMI remain unclear.

**Methods:** Consecutive 19 patients admitted to our hospital presenting Killip IV heart failure and occluded LMCA on emergent coronary angiogram were enrolled. We performed primary PCI of LMCA.

Patients' clinical background, angiographic findings, results of primary PCI, laboratory data, usage of circulatory supporting devices (IABP and PCPS), and elapsed time (from onset to reperfusion) were retrospectively examined. Patients who died in hospital and those who survived were compared.

**Results:** Successful reperfusion was achieved in 19 (100%) patients; IABP was used in 19 (100%) but PCPS in 6 (32%) patients; and 13 (68%) patients survived but 6 (32%) patients died in hospital. Prevalence of diabetes mellitus (83% vs. 23%; $p<0.05$), elapsed time (5.8±2.6 vs. 2.8±1.0 hours; $p<0.05$), and peak CK (15272±10263 vs. 6608±3612 U/l; $p<0.05$) were larger in patients who died than in those who survived.

**Conclusion:** Short elapsed time, small infarct size, and non-diabetic patients were associated with good in-hospital outcome. Therefore, sooner primary PCI of LMCA should be an effective therapeutic strategy for LMCA AMI presenting cardiogenic shock.

## CRT-51

### Stenting of Unprotected Left Main Stem Using the Zotarolimus-coated Endeavor™-Stent. A Single Center Registry

*Klaus Hertting, Angelika Lorenz, Daniel Hausmann, Claudia Zeiler, Werner Raut*
*Buchholz Hospital, Buchholz, Germany*

**Background:** The aim of this registry is to demonstrate whether the implantation of a Zotarolimus-eluting (ZES) Endeavor™ stent (Medtronic Corp., USA.) into an unprotected left main stem is both safe and efficiently feasible in the long term, in an unselected patient population with significant co-morbidities.

**Methods:** Between February 2006 and February 2010, all patients of our department (no on-site cardiac surgery, 24 hours on-call service) who underwent stenting of an unprotected left main stem received an Endeavor™-Stent. Treatment of concomitant lesions was left to the investigators discretion. All patients were included into a registry containing both clinical and interventional data. During follow-up patients were contacted with a written questionnaire. If necessary, the information was supplemented by telephone contact with the patients or their treating physicians. Primary endpoints included death, myocardial infarction (MI) or repeated target lesion revascularization (TLR) and the combination of events (MACE).

**Results:** A total of 58 patients were included (42 men, 16 women, median age 72.3 years). 24% of all the patients had diabetes mellitus. In 53% of the patients, the intervention took place due to angina or proven stress ischemia, in 34% due to a MI within 72 hours, in 12% due to a myocardial infarction more than 72 hours before. Twelve percent had a severely reduced left ventricular ejection fraction (<30%), and 4 patients (7%) were in cardiogenic shock. The median logistic EuroScore was 4.4%; the SYNTAX Score 22.0. Seventy-four percent of the lesions were bifurcation lesions. In 53% of cases there was no intervention of other lesion during the index procedure, in 21% only with Endeavor™ stents, in 16% only with bare metal stents (BMS), in 10% both with Endeavor™ stents and BMS. The median follow-up time was 34.7 months. After 12, 24 and 36 months, total mortality was 14, 17 and 22%; cardiac mortality was 2, 4 and 9%; the TLR rate was 6, 6 and 8%; and the MACE rate was 21, 24, 30 and 33%. Seventy-one percent of all patients had dual antiplatelet therapy up to 6 months after the procedure. Confirmed stent thrombosis occurred in only one case during the follow-up period.

**Conclusions:** As our registry represents all-comers data, the long-term results concerning the safety and efficiency of the Endeavor™ stent in the unprotected main stem of the left coronary artery appeared acceptable.

## CRT-52

### Impact Of Vascular Access Route In Left Main Stem (LMS) Intervention

*Ashish Shah, Tim Kinnaird, Ashesh N Buch, Nick Ossei-Gerning, Richard Anderson*
*University Hospital of Wales, Cardiff, United Kingdom*

**Background:** Percutaneous coronary intervention (PCI) using radial arterial access is challenging and requires steep learning curve, but it is associated with significantly reduced morbidity and mortality, mainly due to reduced procedure related bleeding complications. PCI for left main stem (LMS) coronary artery disease is increasing over period of time.

**Methods:** We analyzed catheter laboratory data from University Hospital of Wales, Cardiff, UK from 2006 to 2010, assessing number of patients undergoing PCI to LMS with or without other vessel coronary intervention using different arterial access (radial vs. femoral arterial route) and procedure outcome.

**Results:** Total 4972 PCIs were performed, of which 177 patients underwent PCI to LMS. Radial access was used in 109 patients, whereas femoral access was used in 68 patients. Their subject characteristics were similar. Patients with previous history of CABG required using left radial access.

During the procedures through radial or femoral access number of vessels (1.9 ± 0.1 vs. 2.2 ± 0.2) or lesions (2.4 ± 0.2 vs. 2.5 ± 0.1) intervened, as well as number of stents (1.9 ± 0.2 vs. 2.3 ± 0.2) used through both accesses were similar. There was no significant difference in procedure time, amount of contrast or radiation use in these groups. We used 7F system through radial access in 18 of our patients (6F system in rest of the patients). Immediate (in hospital) procedure related complications were low using radial vs. femoral access (coronary dissection: 2.8 vs. 3.2%; bleeding: 0.9 vs. 7.8% and shock 2.8 vs. 4.7%). Only 2 patients (1.8%) required changing of the vascular access from radial to femoral due to difficult vascular anatomy.

Proportion of patients undergoing PCI to LMS using radial access (than femoral access) has significantly increased over last 5 years in our institute.

**Conclusions:** LMS PCI can be safely performed using radial arterial access. Operator confidence to use radial access increases with period of time and experience.

## Multivessel Disease

## CRT-53

### Partial Revascularization Plus Medical Treatment Versus Medical Treatment Alone In Patients With Multivessel Coronary Artery Disease Not Eligible For CABG

*Mohamed A Sadaka, Mohamed loutfi, Mohamed Sobhy*
*Alexandria University, Alexandria, Egypt*

**Aim:** The purpose of this study was to compare the impact of incomplete revascularization (IR) plus OMT to OMT alone on 1 year clinical outcomes (death, hospitalization for decompensated heart failure, acute coronary syndrome (ACS), angina class, ejection fraction (EF) and repeated revascularization) in patients with multivessel coronary artery disease (MVD) who were not eligible for coronary bypass graft surgery (CABG).
**Methods:** This is a prospective randomized study conducted on 50 selected patients with chronic stable angina and without past history of revascularization; they have documented MVD by standard coronary angiography and CABG were the only option of revascularization but were refused by surgeon. All patients had non-viable myocardium documented by viability studies were excluded from the study.

Patients were randomized 1:1 into two groups, group (I): 25 patients were subjected to OMT alone and group (II): 25 patients were subjected to IR {PCI in one or two vessel only with drug eluting stents (DES)} plus OMT. All patients were subjected to 1 year follow up.
**Results:** The baseline patients' characteristics were matched in the two studied groups. Also, high syntax score (≥33) was almost found in majority of patients in both groups (23 patients in OMT group and in 24 patients in IR plus OMT group; p = 1.000). All patients were followed up for 1 year ; death occurred slightly more in IR plus OMT group (16% versus 12%; p=1.000), hospitalization for decompensated CHF occurred more in the OMT group (28% versus 12%; p=0.289), ACS occurred more in the OMT group (32% versus 16%; p=0.321) while freedom from angina occurred more in IR plus OMT group (20% versus 4%; p=0.189); however all these differences were not statistically significant. In IR plus OMT group; TVR occurred in 16% of patients while non-TVR in 32% of patients. The OMT alone did not affect neither the level of angina class nor EF; while the IR plus OMT markedly improved the decline in the level of angina class (p = 0.011), but it did not improve EF significantly (p =0.326).
**Conclusion:** In patients with MVD who were not eligible for CABG; IR plus OMT was not superior to OMT alone in improving the 1year clinical outcomes except the improvement in the level of angina class, which could be the adopted strategy to improve the quality of life in such patients.

## CRT-54

### Impact Of Multivessel Disease In Patients With Chronic Total Occlusion On Six-month Angiographic And Two-year Clinical Outcomes

*Seung-Woon Rha, Byoung Geol Choi, Se Yeon Choi, Sung Il Im, Sun Won Kim, Jin Oh Na, Cheol Ung Choi, Hong Euy Lim, Jin Won Kim, Eung Ju Kim, Chang Gyu Park, Hong Seog Seo, Dong Joo Oh*
*Cardiovascular Center, Korea University Guro Hospital, Seoul, Korea, Republic of*

**Background:** Chronic total occlusion (CTO) intervention is still challenging because of the limited procedural success rate and higher recurrence. It is not clear whether the presence of multivessel disease (MVD) will negatively impact on angiographic and clinical outcomes following CTO intervention as compared with single vessel disease (SVD).
**Methods:** A total of 238 consecutive patients (pts) underwent CTO intervention were divided into two groups according to the number of treated vessel (MVD with CTO: n=149 pts, SVD with CTO: n=89 pts). Six-month angiographic and twelve-month clinical outcomes were compared between the two groups.

**Results:** The baseline clinical characteristics were balanced between the two groups except higher incidence of myocardial infarction (MI, 31.5 vs. 17.9 p=0.021) and a lower left ventricular ejection fraction (LVEF, 47.97±12.1% vs. 52.75±9.3%, p=0.001) in the MVD group. The overall procedural success rate, procedural characteristics and procedure related complications including perforation and dissection were not different between the two groups. Angiographic outcomes at 6 months and major clinical outcomes up to 24 months were similar between the two groups except a trend toward higher incidence of total death and major adverse cardiac events (MACE) in the MVD group (Table).
**Conclusions:** Once the CTO intervention was successful, the presence of MVD in CTO patients did not negatively impact on 2-year major clinical outcomes.

Table. Six-month Angiographic and 24-month Clinical Outcomes

| 6-Month Angiographic Outcomes | CTO with MVD (n = 85 pts) | CTO with SVD (n = 47 pts) | P-value |
|---|---|---|---|
| Binary restenosis (>50%) | 16 (18.8) | 6 (12.7) | 0.371 |
| DS% | 31.61 ± 27.37 | 26.10 ± 23.71 | 0.239 |
| FU MLD (mm) | 2.024 ± 0.852 | 2.219 ± 0.757 | 0.183 |
| Late Loss (mm) | 0.676 ± 0.788 | 0.564 ± 0.707 | 0.409 |
| **24-Month Clinical Outcome** | **(n = 136 pts)** | **(n = 86 pts)** | **P-value** |
| Total Death | 8 (5.8) | 1 (1.1) | 0.082 |
| Cardiac death | 4 (2.9) | 0 (0.0) | 0.109 |
| Any MI | 4 (2.9) | 2 (2.3) | 0.783 |
| Q wave | 4 (2.9) | 2 (2.3) | 0.783 |
| Repeat PTCA | 27 (19.8) | 12 (13.9) | 0.261 |
| TLR | 17 (12.5) | 11 (12.7) | 0.949 |
| TVR | 22 (16.1) | 11 (12.7) | 0.490 |
| All MACE | 34 (25.0) | 13 (15.1) | 0.079 |
| TLR MACE | 19 (13.9) | 12 (13.9) | 0.997 |

## CRT-55

### Is It Safe to Perform Staged Percutaneous Coronary Intervention On Non-Culprit Vessels During the Index Hospitalization in Patients with ST-Segment Elevation Myocardial Infarction and Multivessel Coronary Artery Disease?

*Joshua P Loh, Hironori Kitabata, Lakshmana K Pendyala, Israel M Barbash, Danny Dvir, Sa'ar Minha, Salem M Badr, Rebecca Torguson, Lowell F Satler, Kenneth M Kent, William O Suddath, Augusto D Pichard, Ron Waksman*
*MedStar Washington Hospital Center, Washington, DC*

**Background:** In patients with ST-segment elevation myocardial infarction (STEMI) and multivessel disease undergoing primary percutaneous coronary intervention (PCI), staged non-culprit vessel PCI at a separate session is recommended. It is not known whether performing staged PCI within the same hospitalization as the primary PCI is safe.
**Methods:** We analyzed 282 consecutive STEMI patients with multivessel disease who underwent primary PCI followed by staged PCI of the non-culprit vessel. Patients were categorized into staged PCI in the same hospitalization (n=184) and staged PCI at a separate hospitalization within 8 weeks of primary PCI (n=98). In-hospital outcomes and procedural complications after staged PCI were analyzed.
**Results:** Baseline characteristics, STEMI presentation and procedure characteristics were similar in both groups. Contrast amount used was higher in the separate versus same hospitalization group for both index (175 vs. 153ml, p=0.011) and staged (144 vs. 120ml, p=0.004) PCI. More left main PCI occurred in the separate hospitalization group during the staged PCI (3.9 vs. 0.3%, p=0.008). Angiographic success of staged PCI was similar in same versus separate hospitalization, with similar rates of vascular complications and major bleeding, but a trend toward higher incidence of acute renal failure. Following staged PCI, in-hospital major adverse cardiac events (3.3 vs. 1.0%, p=0.43) and mortality (2.7 vs. 0%, p=0.17) were similar in both groups.
**Conclusion:** It is safe to perform staged PCI within the same hospitalization as primary PCI, achieving similar procedural success and in-hospital outcomes as staged PCI at a separate hospitalization. Higher contrast volume used during primary PCI and the presence of left main lesion in non-culprit vessels may influence the decision to stage the PCI at a separate hospitalization.