Impact Of Intraaortic Balloon Pump On 30-Day Mortality In Cardiogenic Shock AMI Patients With Unsuccessful And Successful Primary PCI - Analysis From PL-ACS Registry

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Background: Recently, usefulness of intraaortic balloon pump (IABP) for patients with cardiogenic shock (CS) is questioned. Therefore we analysed influence of IABP in CS AMI patients with unsuccessful and successful primary PCI on 30-day mortality.

Methods: We analysed 4211 patients with CS and AMI from nationwide PL-ACS registry. Unsuccessful PCI was defined as final TIMI flow grade 0 or 1. After adjustment in multivariate Cox proportional model regression IABP remained significantly associated with reduction of 30-day mortality in patients with unsuccessful PCI (HR = 0.71, 95% CI = 0.55-0.91, p=0.0065) and increased mortality in patients with successful PCI (HR = 1.26, 95% CI = 1.13-1.43, p<0.0001).

Results: Of the total population, 8.1% (n=341) were admitted with a STEMI and received PPCI in a tertiary cardiac centre in the UK and to 14134 enrolled patients, 1302 patients with STEMI were treated with the Nobori DES. Mid-term and long-term outcomes (up to 1 and 3 years) are available for 806 and 248 patients respectively. Adverse events were adjudicated by CEC.

Results: STEMI patients were 50.1±13.0 years old, 79% males, 16% with prior MI and 10% with prior coronary revascularizations. The median time to balloon was <3 hours in 37.6%; >3 to <6 hours in 22.6%; >6 to 12 hours in 12.8% and >12 hours in 19.6% of the patients. The median door-to-balloon time was 55 minutes. Lesions were complex (61.9% B2/C2), calcified (25.5%), and containing thrombus (47.4%). Low perfusion TIMI flow was observed in 43.3% of lesions before PCI. Final TIMI 3 was achieved in 96.0%. Most of the STEMI had anterior (50%) or inferior (39%) location. 43% of all STEMI patients received adjunctive treatment: either heparinoid support (9.0%), intravenous thrombolysis (15.7%), pre-procedural GP IIb/IIIa inhibitor (9.9%), thrombus aspiration (26.1%) or other specific treatment (14.9%). At 1 year, 8 patients died because of cardiac reasons (1.0%), 15 patients suffered re-infarctions (1.9%) 19 patients underwent TLR (2.4%) and 9 (1.1%) patients TVR. The TLF rate was 3.4%, while MACE rate was 4.8%. There were 9 (1.1%) definite or probable stent thromboses, of which 1 acute, 7 subacute and one late ST. In the patient cohort followed at 3-year, 2 patients died from cardiac causes (0.8%), 10 had re-infarction (4.0%) with a TLF rate of 6.1%. No patient suffered very late stent thrombosis between 1- and 3-years follow-up.

Conclusions: Despite limitations of registry and possibility of bias in enrolling lower risk patients our data show that treatment of STEMI patients with bioresorbable polymer coated DES was associated with favorable mid- and long-term outcomes and low rate of stent thrombosis. These data, confirm both efficacy and safety of DES with bioresorbable polymer in this complex patient's subset.

Impact of arterial access on all cause mortality in octogenarians, following Primary Percutaneous Intervention (PCI) for ST elevation myocardial infarction (STEMI) - Mid- and long-term clinical outcomes

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Background: New-generation DES showed favourable outcomes in patients with STEMI. We aim to assess mid- and long-term outcomes in STEMI patients treated with Nobori, DES with bioresorbable polymer.

Methods: The registry included in 2 large, prospective, multi-center registries, out of 14134 enrolled patients, 1302 patients with STEMI were treated with the Nobori DES. Mid-term and long-term outcomes (up to 1 and 3 years) are available for 806 and 248 patients respectively. Adverse events were adjudicated by CEC.

Results: STEMI patients were 50.1±13.0 years old, 79% males, 16% with prior MI and 10% with prior coronary revascularizations. The median time to balloon was <3 hours in 37.6%; >3 to <6 hours in 22.6%; >6 to 12 hours in 12.8% and >12 hours in 19.6% of the patients. The median door-to-balloon time was 55 minutes. Lesions were complex (61.9% B2/C2), calcified (25.5%), and containing thrombus (47.4%). Low perfusion TIMI flow was observed in 43.3% of lesions before PCI. Final TIMI 3 was achieved in 96.0%. Most of the STEMI had anterior (50%) or inferior (39%) location. 43% of all STEMI patients received adjunctive treatment: either heparinoid support (9.0%), intravenous thrombolysis (15.7%), pre-procedural GP IIb/IIIa inhibitor (9.9%), thrombus aspiration (26.1%) or other specific treatment (14.9%). At 1 year, 8 patients died because of cardiac reasons (1.0%), 15 patients suffered re-infarctions (1.9%) 19 patients underwent TLR (2.4%) and 9 (1.1%) patients TVR. The TLF rate was 3.4%, while MACE rate was 4.8%. There were 9 (1.1%) definite or probable stent thromboses, of which 1 acute, 7 subacute and one late ST. In the patient cohort followed at 3-year, 2 patients died from cardiac causes (0.8%), 10 had re-infarction (4.0%) with a TLF rate of 6.1%. No patient suffered very late stent thrombosis between 1- and 3-years follow-up.

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Background: The purpose of this observational study was to evaluate the effects of radial artery access (RA) versus femoral artery access (FA) on patients undergoing percutaneous coronary intervention (PCI) due to acute coronary syndrome, i.e. ST-elevation myocardial infarction (STEMI) and unstable angina/non-STEMI (UA/NSTEMI).

Methods: Data were obtained from the SCAAR registry (Swedish Coronary Angiography and Angioplasty Registry) for PCI procedures performed in Vastra Gotaland region, Sweden. Data was taken between May 2005-2011. We evaluated 30-days mortality in 1429 elderly patients (age >80 years of age). PCI was performed through RA in 542 patients and through FA in 887 patients. The two groups were compared using Cox proportional hazards regression with shared frailty to account for hierarchical database. Adjustments for the differences in baseline characteristics were made with propensity score. The following variables were included in the calculation of the propensity score: age, gender, indication for PCI, smoking habits, hypertension, diabetes, hyperlipidemia, severity of coronary disease, previous infarction, previous PCI, previous coronary artery by-pass surgery (CABG), anticoagulation therapy with glycoprotein IIb/IIIa receptor antagonists (GP IIb/IIIa), bivalirudin, clopidogrel, unfractionated heparin low-molecular weight heparins (UH/LMWH), year, hospital.

Results: The mean age was 83.4 ± 3.2 and 83.5 ± 3.1 in the RA and FA group respectively (p=0.51). The two groups were balanced regarding gender, diabetes,
oral presentations:

**TCT-47**

**Angiographic And Procedural Outcome Of Percutaneous Coronary Intervention With The STENTYS® Self-Apposing Coronary Stent In Patients Not Treated For STEMI.**

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**Background:** Treatment of complex lesions in coronary arteries with aneurysms, ectasia, or tapering remains challenging due to a high risk of vessel wall-stent diameter mismatch. The self-apposing STENTYS® stent (STENTYS SA, Paris, France) is designed to adjust to variable vessel sizes, which may optimize the vessel wall-stent match and reduce the risk of stent malapposition. STENTYS is extensively evaluated in ST-segment elevation myocardial infarction (STEMI) patients, but there is a paucity of data on other treatment indications. We evaluated the feasibility and safety of the STENTYS stent in complex lesions with a high risk of diameter mismatch.

**Methods:** We included consecutive patients treated with STENTYS between April 2010 and June 2013 because of angiographic characteristics with a high risk of diameter mismatch, including aneurysms, ectasia, tapering, bifurcation lesions, and saphenous vein graft (SVG). STENTYS stents were excluded. Angiographic success was defined as final residual stenosis <5% in the target vessel with TIMI 3 flow. Procedural success was defined as angiographic success without in-hospital cardiac death, myocardial infarction (MI) or target vessel revascularization (TVR).

**Results:** A total of 87 patients were included, mean age was 65±12 years. 11 patients (12.6%) had multivessel disease, 74 patients (84.5%) had diabetes mellitus, and 57 patients (65.1%) had prior PCI. STENTYS stent was successfully implanted in 84 patients (96.6%). In 6 (8%) patients there was a mismatch between the stent and target vessel. In 12 patients there was a high risk of diameter mismatch. Long-term clinical follow-up, which will be available at TCT, is needed to evaluate whether the self-apposing stent technique translates into favourable clinical outcomes.

**Conclusions:** Both the in-hospital complications and the difference in freedom from MACE at 3 years were statistically lower in TRI group compared with TFI group.

**TCT-48**

**Comparison of long-term outcome between transradial approach and transfemoral approach for patients with ST-segment elevation myocardial infarction.**

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**Background:** So e trials have suggested that transfemoral intervention (TRI) reduces vascular complications and bleeding compared with transradial intervention (TFI). However, the long term outcomes are still not clear in patients with ST-segment elevation myocardial infarction (STEMI). In this study, we aimed to assess the feasibility and the long term outcomes of TRI in patients with who underwent primary percutaneous coronary intervention (PCI).

**Methods:** This study was multicenter, retrospective observational study. Between January 2006 and December 2010, a total of 550 STEMI patients underwent primary PCI. Out of these patients, TRI was performed in 208 patients and TFI was performed in 342 patients. Mean follow-up period was 33±25 months. Outcome measures were in-hospital complications (all-cause death, recurrent myocardial infarction, stroke, major bleeding) and major adverse cardiovascular events (MACE: all-cause death, target vessel revascularization (TVR), recurrent myocardial infarction, admission of heart failure) at 3 years.

**Results:** There was no statistical difference in patients characteristics between two groups. During the initial hospitalization, the complications rate was 2.9% in TRI group and 9.4% in TFI group (P=0.004). Kaplan-Meier survival curves showed that the freedom from MACE was 76.9% in TRI versus 68.4% in TFI at three years (P=0.03).

**TCT-49**

**Comparison Of Stent Thrombosis Outcomes After Percutaneous Coronary Intervention Across Different Clinical Presentations.**

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**Background:** Percutaneous coronary intervention (PCI) in the setting of acute myocardial infarction (MI) is known to predict stent thrombosis. However, the association between the spectrum of clinical presentation and stent thrombosis after PCI has not been well defined. This study aims to compare the stent thrombosis rates across the acuity of clinical presentation for PCI.

**Methods:** The study included a cohort of 12198 consecutive patients who underwent PCI. Patients were categorized according to their clinical presentation: stable angina pectoris (SAP, n=7000), unstable angina pectoris (UAP, n=4083), and STEMI (STEMI, n=4083). The ARC-definition of stent thrombosis rates were compared among the groups.

**Results:** Antiplatelet loading was similar across groups (85% overall). The use of drug-eluting stents (DES) in STEMI pts. was 51.3%, 73% in NSTEMI, 77.4% in non-ST-segment elevation MI (NSTEMI, n=4083), and ST-segment elevation MI (STEMI, n=4083). The ARC-defined stent thrombosis rates were compared among the groups.

**Conclusion:** Antiplatelet loading was similar across groups (85% overall). The use of drug-eluting stents (DES) in STEMI pts. was 51.3%, 73% in NSTEMI, 77.4% in ST-segment elevation MI (STEMI, n=4083). The ARC-definition of stent thrombosis rates were compared among the groups. Figure Similarly, rates of probable stent thrombosis increased with the acuity of the clinical presentation: lowest in UAP and highest in STEMI. The majority of definite (71.4%) and probable (66.6%) stent thrombosis occurred early (within 30 days). The rates of death and myocardial infarction corresponded with the acuity of clinical presentation.

**Conclusions:** In patients undergoing PCI, the acuity of clinical presentation corresponded with the incidence of stent thrombosis. A pro-inflammatory milieu promoting thrombosis and delaying endothelial healing may contribute to this.