Conclusion: Percutaneous coronary intervention may shortening the duration of rhythm conversion of patients with STEMI (>12 hours) who were presented with third or second degree type two AV block.

P6365
IABP supported PPCI in Patients aged ≥80 years vs <80 years

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Objective: The outcomes of intra-aortic balloon pump (IABP) supported primary percutaneous coronary intervention (PPCI) in the very elderly patients with ST-segment elevation myocardial infarction (STEMI) are rarely reported. We sought to compare the short and long term prognosis of those patients aged ≥80 years versus <80 years.
Methods: We retrospectively analyzed the demographic, angiographic and clinical follow-up data of patients with STEMI who underwent PPCI supported by IABP in our hospital from Jan, 2004 to Dec, 2015. The patients were divided into two groups of aged ≥80 years (n=51) and <80 years (n=237). The patients with cardiogenic shock or mechanical complication were excluded. The major end points of the study were major adverse cardiac and cerebral events (MACCE, composed of death, cardiogenic shock, new or worsen heart failure, re-infarction and stroke) 1 month after PPCI and death 1 month, 1 year and 2 years after PPCI respectively.
Results: The mean ages of both groups were 83.1±2.9 and 59.5±12.1 respectively (P<0.001). The rate of MACCE one month after PPCI was significantly higher in those aged≥80 years (41.2% vs 24.5%, P=0.029), in which only the incidence of stroke was significantly higher as compared with <80 years group (9.8% vs 0.8%,P<0.001). The death rates were not significantly different between ≥80 years group and <80 years group 1 month (17.6% vs 15.2%, P=0.698)and 1 year (25.5% vs 16.9%, P=0.168)after PPCI, but higher in≥80 years group at 2 years post PPCI (35.3% vs 20.7%, P=0.037). Multivariable analysis with Cox proportional hazards modeling indicated post procedure TIMI flow <3 was the strong independent predictor of MACCE (HR:3.41, 95% CI: 2.09–5.56,P<0.0001), and also the strongest predictor for death at each time points after PPCI (1 month:HR:9.51, 95% CI: 5.23–17.29; 1 year:HR:7.24, 95% CI: 4.13–12.69; 2 year: 5.85, 95% CI: 3.45–9.94; all P<0.0001). Age ≥80 years did not show any significantly predictive effect on any study end point.
Conclusions: Use of IABP during PPCI indicates the serious illness state of patients with STEMI. It seems these octogenarian patients only show higher death rate at more longer term followup of 2 years post PPCI as compared with the younger population. The MACCE was higher in ≥80 years group as compared with<80 years group one month after PPCI, in which only the incidence of stroke was significantly higher in octogenarian patients. Age ≥80 years shows no independent predictive effect on any study end point.

P6366
The use of intra-aortic balloon pump in a large population of STEMI patients treated by primary percutaneous coronary intervention

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Background: The routine use of intra-aortic balloon pump (IABP) in patients with ST elevation myocardial infarction (STEMI) complicated by cardiogenic shock (CS) has received a class III B in the 2017 ESC Guidelines, due to evidence from recent randomized clinical trials. However, the population enrolled in randomized clinical trial does not adequately reflect real life well enough and this device is still widely use in clinical practice.
Purpose: The aim of the present study was to analyse the use of IABP over a period of 12 years and to evaluate its effect on in-hospital mortality in a large multicenter population of consecutive STEMI patients complicated by cardiogenic shock.
Methods: We enrolled 4365 consecutive STEMI patients treated by primary PCI in two Hospitals in Italy from 2005 to 2017. Shock was defined as the presence of Killip class 4 and/or systolic blood pressure persistently <90 mmHg. Comparisons between groups were made by cross-tables and Chi-square test or Mann Whitney U test as appropriate. Mortality analysis were performed using Kaplan-Meier curves and a multivariable logistic regression model.
Results: CS occurred in 233 patients (5%), while IABP was used in 297 patients (6.8% of total population) and in 41.6% of patients with CS. Overall, the use of IABP decreased from 12.1% in 2005 to 3.4% of 2017, with a clear trend toward reduction in the last 3 years (8.3% in 2015, 5.5% in 2016, 3.4% in 2017). IABP was used more often in females (8.9% of IABP use in females vs 6.2% in males, p=0.003), in patients with anterior MI (10.5% vs 3.5%, p<0.001), diabetics (9.6% vs 6%, p=0.039), with 3-vessel disease (14.3% vs 4.8%, p<0.001) and left main involvement (51.4% vs 6.1%, p<0.001); it was used less frequently in smokers (5.9% vs 7.5%, p=0.03) and hypercholesterolemia (4.7% vs 8.5%, p<0.001). There was no difference in age and BMI. IABP use was associate with lower LVEF (35% (25%-43%), 50% (40%-55%); p<0.001) and haemoglobin values at admission (13.9 (12.45–14.9) vs 14.2 (13–15.2); p<0.001), while there was no difference for creatinine values. Among CS patients IABP use was associated with a higher mortality (41.2% vs 21.8%, p=0.007), but was not an independent predictor of mortality (HR 1.6, IC5%-95% 0.8–3.2, p=0.183).
Conclusions: According to our results, the use of IABP in patients with STEMI complicated by CS did not improve survival, its use, however, did not appear to be harmful. The present data are in agreement with the ESC recommendation of avoiding a routinely use of IABP in patients with CS, and suggest the need of further research aiming to find a subset of high risk patients in which its use could be beneficial. Furthermore, our data showed a use of IABP in patients without CS, particularly in patients with challenging coronary anatomy (left main involvement or three vessel coronary disease).

P6367
Recovery of myocardial perfusion after percutaneous intervention of chronic total occlusions and non-occlusive lesions is comparable

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Background: The effectiveness of chronic coronary total occlusion (CTO) percutaneous coronary intervention (PCI) is being questioned.
Purpose: The aim of this study was to assess the effects of CTO PCI on absolute myocardial perfusion, as compared with PCI of hemodynamically significant non-occlusive lesions (stenosis >90% or fractional flow reserve-guided (≤0.80)).
Methods: Patients with a preserved left ventricular ejection fraction (≥50%) and a successful PCI were eligible for inclusion if oxygen labeled H2(15)O positron emission tomography was performed prior and after PCI between 2012 and 2017. Quantitative (hyperemic) myocardial blood flow (MBF), coronary flow reserve (CFR) and perfusion defect size (myocardial segments) were compared between CTOs and non-occlusive lesions prior and after successful PCI.
Results: Ninety-two patients with a CTO and 31 patients with a non-occlusive lesion were included for analysis. CTOs were responsible for an increased myocardial defect size (4.51±1.69 vs. 3.23±2.38 segments, p<0.01) with lower mean hyperemic MBF (1.30±0.37 vs. 1.58±0.62 mL min^{-1} g^{-1}, p<0.01) compared with non-occlusive lesions. Before PCI, the CFR was equally impaired in both groups (p=0.17) and increased similarly (p=0.35) to a normal CFR after PCI (p=0.94). The increase in hyperemic MBF was comparable in both groups (p=0.57) and led to a within normal range hyperemic MBF after both CTO PCI and non-CTO PCI (2.48±0.73 vs. 2.89±0.94 mL min^{-1} g^{-1}), with higher absolute values after the latter (p=0.03). Myocardial defect sizes decreased similarly in both groups after PCI (p=0.14) leading to a small residual defect size in patients with CTOs and non-occlusive lesions (1.15±1.44 vs. 0.61±1.45 segments, p=0.054).
Conclusions: CTOs induce a more extensive myocardial perfusion defect size with lower hyperemic MBF values compared to hemodynamically significant non-occlusive lesions. CTO PCI improved myocardial perfusion in a comparable degree as non-CTO PCI.

P6368
Drug-eluting balloon catheters in the endovascular treatment of patients with true left main bifurcation lesions

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Aim: To evaluate the effectiveness of drug-eluting balloons in patients with Left Main (LM) bifurcation stenosis.
Material: 128 patients with true bifurcation lesions of the LM were included in the study. All patients underwent "Provisional T" stenting of the LM coronary artery with the final kissing-dilatation technique. Depending on the balloon catheters used for the final kissing, the patients were randomized into 2 groups. Group I (n=64) - a kissing-dilatation performed with traditional NC balloon catheters, and group II (n=64) - who had a kissing-dilatation of the main bifurcation artery with a traditional NC balloon catheters, and a side branch - with drug-eluting balloon catheters. In addition, patients from group II also underwent kissing-predilatation with drug-eluting balloon catheters. Inclusion criteria: true bifurcation stenosis of the LMCA from QSA and IVUS data; SYNTAXscore <32. Primary endpoints: incidence of MACE - death, MI, re-interventions.
Results: All patients were implanted with drug-eluting stents. Survival of patients after PCI was 100% in both groups. All interventions are performed without complications. 6-month results were analyzed in all patients. After 6-months no cases of MACE were observed. In 3 patients (4.7%), group I showed signs of new-intima hyperplasia (restenosis up to 50%), repeated interventions were not performed. 12-month results were followed in 52 patients from group I and 48 patients from group II. In 1 patient (1.9%) from group I, and 1 patient (2.1%) from group II (p>0.05) there was a recurrence of angina. Myocardial ischemia is confirmed by