Conclusions: P-MI following CTO intervention was associated with higher 2-year mortality, any MI and TVR-MACE. Careful procedure to minimize P-MI will be warranted to get optimal CTO intervention outcomes.

Methods: From January 2007 to January 2012, 5568 PCI were performed in our hospital. 0.64% of them were CTO PCI. A total of 405 patients undergoing PCI for CTO procedures were studied. Patients were grouped according PCI year performing, CTO complexity (J CTO score was calculated for all patients), approach (anterograde or retrograde) and PCI results (successful or unsuccessful).

Results: The median age of patients was 64 years (38-88) and 76% was male. Retrograde approach (RA) was used in 138 (28.7%) cases. RA usage has increased from 15.9% in 2007 till 46.8% of cases in 2012. The overall patient and procedure success rates were 77.8% (315/405) and 69.9% (340/496) respectively. Overall success rate has increased from 61.4% in 2007 till 87.1% in 2012 (p < 0.005). For less complex CTO lesions (J CTO score 0-1) retrograde approach was used in 5.1% and 19.8% of cases respectively, for intermediate complex lesions (J CTO score 2 and 3) in 28.5% and 42.3% respectively, for very complex lesions (J CTO score 4) in 70.6% of cases (p < 0.001). Total complications rate was 13.7%. In anterograde approach group 11.4%, in retrograde group 19.6% (p = 0.018). In anterograde procedures group has found better survival results in successful procedures group, but difference was not significant (Long-rank test p = 0.192). In retrograde procedures group also better survival was found in successful procedures group and difference was significant (Long-rank test p = 0.012). In unsuccessful procedures group was found similar survival results in both – anterograde and retrograde groups (Long-rank test p = 0.751). Overall survival was found better in patients group after successful procedure (Long-rank test p = 0.019).

Conclusions: Retrograde approach usage significantly increase CTO PCI success rate. Long-term outcome and survival after CTO PCI is not depending on approach (anterograde or retrograde), but on procedural success.

TCT-360

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Background: There is limited evidence regarding predictors associated with clinical outcomes of patients with chronic total occlusion (CTO) successfully treated with drug-eluting stents (DESs).

Methods: We investigated the 249 patients (pts) with de novo CTO lesions successfully treated with DESs from 2004 to 2010. All major adverse cardiovascular events (ALL-MACEs) were defined as composite of total death, any myocardial infarction (MI), target vessel revascularization (TVR) and non-target vessel revascularization. The association of ALL-MACEs with clinical, biochemical and procedural variables were examined.

Results: The 12-month follow-up has been performed in the 242 of 249 pts (97.2%). The incidence of ALL-MACEs was the 40 of 242 patients (16.5%). Multivariate logistic regression was used to identify predictors affecting 1-year ALL-MACE. Left main involvement was significantly associated with 1-year ALL-MACEs and prior PCI history had a trend to be associated with 1-year ALL-MACEs (Table). Conclusion: In our study, left main involvement was an important independent predictor associated with 1-year MACE following successful CTO intervention with DES.

TCT-359
Predictors associated with Major Adverse Cardiac Events following Successful Chronic Total Occlusion Intervention with Drug-eluting Stents

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TCT-361
Prognostic Impact of Non-Infarct-Related-Artery Chronic Total Occlusion Revascularization in Patients with Acute Myocardial Infarction Treated by Primary Angioplasty

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Background: Registries and randomized trials have shown that non-infarct-related-artery (IRA) chronic total occlusion (CTO) carries a poor early and late outcome in patients with acute myocardial infarction (AMI) treated with primary percutaneous coronary intervention (PCI). We sought to investigate the prognostic impact of a staged successful CTO-PCI in patients with AMI treated with primary PCI.

Methods: From 2003 to 2011, 1,756 patients underwent primary PCI. Out of these, 212 (12%) had a concurrent non-IRA CTO; in 70 patients (33%) a staged CTO-PCI attempt was performed and was successful in 53 (76%). The 6-month cardiovascular mortality in the successful revascularization of CTO (s-CTO; n=53) group was compared with the persistently occluded CTO (o-CTO; n=159) group. Multivariable analysis was performed to identify independent predictors of mortality.

Results: The mean age was lower in s-CTO than o-CTO (64 ± 11 vs. 69 ± 13; p=0.010) and left anterior descending artery (LAD) PCI rate was higher in s-CTO (32% vs. 18%; p=0.034). There were no differences between groups in the incidence of diabetes (17% vs. 15%), anterior AMI (45% vs. 40%) and Killip class 3-4 on admission (23% vs. 26%). All patients with successful CTO-PCI received DES in CTO lesions. In the s-CTO group a complete coronary revascularization was achieved in 92% of the patients. The 6-month clinical follow-up rate was 100%. The cardiovascular mortality rate was 1.9% in the s-CTO group and 16.4% in the o-CTO group (p=0.006). At multivariate analysis s-CTO (HR 5.3; p<0.001) and Killip class 3-4 on admission (HR 14; p<0.001) resulted independent predictors of mortality.

Conclusions: In the setting of high risk patients with AMI and a concurrent non-IRA CTO, the successful CTO-PCI after primary angioplasty was associated with an improvement in survival. These data support the benefit of complete coronary revascularization in this subset of patients with AMI.

TCT-362
Percutaneous Coronary Intervention for Multiple Chronic Total Occlusions

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Background: The aim of this study was to determine the impact on survival of successful percutaneous coronary intervention (PCI) of multiple chronic total occlusions (CTO). No data exist about PCI and clinical outcome in patients with multiple CTOs.

Methods: The Florence CTO registry includes patients treated with drug-eluting stent for a total of 249 CTOs from 2004 to 2010. CTO PCI was performed in 195 CTOs, and in 76 patients (63.3%) PCI was successful in all attempted CTOs, while in 34 patients CTO PCI was partially successful, and in 10 completely unsuccessful. Cardiac mortality at 12 months was lower in the CTO PCI success group than CTO PCI failure or partial success group.