approach is in the global context of less patient fragility and the positivity of an ischemia test.

**CRT-136**

**Retrograde Recanalization of Chronic Total Occlusions in Europe: Procedural and In-Hospital Outcomes from the Multicenter Ercto Registry**

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**Objective:** The aim of this study was to describe the five-year European experience of retrograde percutaneous coronary interventions (PCI) recanalization for complex chronic total occlusions (CTOs) of coronary arteries.

**Background:** Retrograde approach increases the success rate of percutaneous recanalization of complex CTOs of coronary arteries.

**Methods:** Demographic data, procedural outcomes and in-hospital clinical events were collected on 1582 consecutive lesions of 1395 patients enrolled between January 2008 and December 2012 having retrograde CTO PCI at 44 European medical centers by 45 experienced interventionalist operators. A revision of J-CTO score was proposed for antegrade lesions to better describe success according to lesion difficulty.

**Results:** Patients mean age was 62.0±10.4 years, 88.5% were men, 17.6% had prior coronary artery bypass surgery. The CTO target vessel was the right coronary artery (70.4%), circumflex (7.8%), left anterior descending artery (20.3%), and left main artery or by-pass graft (1.5%). The retrograde approach was used after prior failed attempt in 43.3% of cases. During the procedure the retrograde approach was used as first line strategy in 76.2% of cases, while immediately after antegrade failed approach in complex 23.8% of cases. Retrograde collateral vessels were septal (62.7%), epicardial (13.4%), by-pass graft (3.9%) or missing information (20.0%). Technical success was 75.3% (n=1.191). The mean contrast volume and fluoroscopy time were 396.3±171.3 ml and 69.8±34.1 mins, respectively. A major complication occurred in 16 patients (1.0%). In multivariable analysis, age of the patient (per 10-year increase), lower operator volume (<50, 50-100, >100), increased J-CTO score were significantly associated with increased technical failure, (p=0.01, p=0.001, p=0.001), respectively.

**Conclusion:** In Europe among selected centers dedicated to CTO recanalization, retrograde approach was performed over a 5-year period in 16.5% of these patients. The number of retrograde procedures were exponentially increasing during the last 2 years and were associated with high success and low major complications rates.

**CRT-137**

**Myocardial Perfusion in Patients with Total Occlusion of a Single Coronary Artery with and without Collateral Circulation**

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**Background:** Previous studies that investigated the effects of coronary collateral circulation on myocardial perfusion were compromised by inclusion of patients with multivessel coronary artery disease, incomplete occlusion, prior myocardial infarction, or a combination of these.

**Aim of work:** In this study we will investigate the relationship between angiographic collateral circulation and myocardial perfusion in patients with total occlusion of a single coronary artery, in the absence of myocardial infarction or significant stenosis in the other coronary arteries supplying the same myocardial territory.

**Methods and Results:** Forty patients underwent stress myocardial single photon emission computed tomography within 90 days of angiography. Collateral circulation was present in 24 patients (group A) and absent in 16 patients (group B). Reversible perfusion defects were present in 22/91.7% patients in group A and in 12/75% in group B, comparison between both groups came back statistically insignificant (p-value = NS). Group A included 4/18.2% patients with a small size defect (<5%), 9/40.9% patients with a moderate perfusion defect (5-10%) and 9/40.9% patients with a large perfusion defect (>10%); while group B had 2/16.6% patients with small perfusion defect, 5/41.6% patients with a moderate perfusion defect and also 5/41.6% patients with a large perfusion defect, comparison between both groups came back statistically insignificant (p-value = NS). The mean exercise time for patients in group A was 6.9±0.92 minutes and their mean achieved peak METs was 7.35±0.35 METs. On the other hand; the mean exercise time for patients in group B was 6.9±0.83 minutes and their mean peak METs was 7.23±0.25 METS. Comparison between both groups also appeared to be statistically insignificant (p-value = NS).

**Conclusion:** In patients with a single-vessel total coronary occlusion and without myocardial infarction, stress-induced myocardial ischemia is almost always present, irrespective of presence or absence of angiographic collaterals. These data suggest that coronary collaterals do not appear to protect against stress-induced perfusion defects. Nevertheless collaterals in our study did not have any positive impact on the functional capacity of patients, predicted by the analysis of exercise duration and achieved peak METs.

**CRT-139**

**Restenotic Stented Versus De Novo Chronic Total Occlusion Outcomes Following Successful Intervention with Drug-eluting Stents**

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**Background:** There are limited data comparing angiographic and clinical outcomes of re-stenotic stented chronic total occlusion (CTO) lesion successfully recanalized with drug-eluting stents (DESs) with those of de novo CTO lesion.

**Methods:** The study population consisted of consecutive 269 CTO patients (pts) who successfully treated with DESs between January 2004 and June 2010. A total 249 pts with de novo CTO lesion and 20 pts with re-stentent stented CTO lesion were included for analysis. The 6-to-9 month angiographic and 2-year clinical outcomes were compared between the 2 groups.

**Results:** The baseline clinical characteristics were similar between the two groups except prior myocardial infarction, LDL cholesterol level, number of total implanted stent and use of clostatol. Angiographic outcomes at 6-to-9 months were similar between the two groups. At 2-year follow-up, the incidence of major clinical outcomes including all death, any myocardial infarction, any revascularization, target lesion and vessel recanalization (TLR and TVR) and major adverse cardiac events (MACEs) were similar between the two groups (Table). Further, even after adjustment of baseline differences with multivariate analysis adjusted by age, gender, dyslipidemia, LVEF, LEFve classification, all the major clinical outcomes were similar between the two groups.

**Conclusion:** In our study, there were no difference in 6-to-9 month angiographic and 2-year clinical outcomes between pts with stented and de novo CTO lesions once the CTO pts were successfully treated with DESs.