

type, large PC and large TPA, as outliers, were captured in all valve types.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-109

Ten-year clinical outcome in patients with Coronary Chronic Total Occlusions not revascularized by Percutaneous Coronary Intervention



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BACKGROUND Chronic total occlusions (CTOs) are associated with angina, ischemia, myocardial dysfunction, arrhythmias and poor outcomes. Whether CTO revascularization could effectively translate in lower mortality is still matter of debate. Aim of this study was to assess whether CTO recanalization could improve mortality outcomes at a very long term follow-up of 10 years.

METHODS Between 1998-2008 we collected data of 912 patients undergoing coronary angiography (CA) due to angina/proof of ischemia. Patients showing at least one CTO and in whom an attempt of recanalization was pursued at the index CA were included in this study. The cohort was divided in “revascularized” (n=585) or “not revascularized” (n=327) according to successful CTO recanalization. Moreover, patients were included only if a 5-year follow-up was available. Follow-up was censored at last visit or at 10 years. Endpoints were overall mortality, cardiac mortality (due to heart failure, ACS, arrhythmia), sudden/aborted death (appropriate shock in those bearing an ICD).

RESULTS Baseline clinical characteristics were similar. However, “non revascularized” tended to be older (64.8±10.2 vs 61.5±10.1 years; p<0.01), had a lower ejection fraction (LVEF) (50.4±11.4 vs 53.4±10.0%; p<0.01) and more frequently presented with unstable angina (20.7 vs 14.7%; p=0.02). At CA, “non revascularized” often had complex CAD with more than one CTO (12.8 vs 7.4%; p=0.01), blunt stump CTO (48.6 vs 27.5%; p<0.01) and less bridging collaterals (34.2 vs 47.4%; p<0.01). Right coronary artery was more involved (43.4 vs 36.6%; p=0.04). “Revascularized” patients more frequently presented with single vessel CAD (23.9 vs 15.9%; p=0.03), often involving LAD artery (32.0 vs 22.3%; p=0.02). Median follow-up was 9.8 years (IQR 5.9-12.1). A total of 113 and 116 deaths occurred in the “revascularized” and in the “non revascularized” groups, respectively: overall mortality was significantly lower in the “revascularized” group (19.3 vs 35.5%; p<0.001; RR 0.46; 95%CI 0.36-0.56). A total of 45 and 58 cardiac and of 14 and 21 sudden deaths occurred in the “revascularized” and in the “non revascularized” groups, respectively. Cardiac mortality (7.7 vs 17.7%; p<0.001; RR 0.38; 95% CI: 0.26-0.56) and arrhythmic mortality (2.4 vs 6.4%; p=0.001; RR 0.31; 95%CI 0.16-0.62) were significantly lower in the “revascularized” group. At Cox regression, age (HR 1.08; 95%CI 1.06-1.09; p<0.001), LVEF (HR 0.97; 95%CI 0.96-0.98; p<0.001) and CTO non-recanalization (RR 1.72; 95%CI 1.32-2.24; p<0.001) were found powerful predictors of all cause death. The same variables predicted cardiac mortality with similar relative risks: age (HR 1.08; 95%CI 1.06-1.10; p<0.001), LVEF (HR 0.96; 95%CI 0.95-0.98; p<0.001) and CTO non-recanalization (RR 2.02; 95%CI 1.36-3.00; p<0.001). Age (HR 1.08; 95%CI 1.04-1.12; p<0.001), LVEF (HR 0.95; 95%CI 0.92-0.97; p<0.001) and CTO non-recanalization (RR 2.43; 95% CI 1.22-4.83; p=0.01) also predicted sudden/aborted death.

CONCLUSION This study demonstrates how, at a very long-term follow-up of 10 years, CTO recanalization improved outcomes, reducing overall, cardiac and arrhythmic mortality. A non-revascularized CTO confers a 2-fold increase risk of subsequent cardiovascular mortality and 3-fold risk of sudden death.

CATEGORIES CORONARY: PCI Outcomes

TCT-110

Peri-procedural Myocardial Infarction and Mortality in Patients Undergoing PCI vs. CABG for Left Main Disease: Analysis from the EXCEL Trial



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BACKGROUND The prognostic implications of peri-procedural MI (MIpp) after PCI vs. CABG remain controversial. The EXCEL trial enrolled 1905 pts with left main (LM) disease and low or intermediate SYNTAX scores to PCI with everolimus-eluting stents vs. CABG.

METHODS We compared 3-year mortality outcomes (all-cause and CV) in pts with vs. without a MIpp and assessed interaction by treatment allocation (PCI vs. CABG) in EXCEL. MIpp was defined using an identical threshold for PCI and CABG (>10X peak CK-MB elevation within 72 hrs. or >5X with new Q-Waves, loss of graft or native vessel, or loss of myocardium on imaging). Cox proportional hazards modelling was performed controlling for age, sex, diabetes, SYNTAX score, and LVEF. For the present analysis, we excluded patients who did not receive their assigned treatment as their first procedure (i.e., crossovers).

RESULTS MIpp occurred in 34/935 (3.6%) of pts in the PCI group and 56/923 (6.1%) of pts in the CABG group (HR 0.58 [95% CI 0.38-0.89]; p=0.013). On univariate analysis, MIpp was associated with CV death and all-cause death at 3 years (Table). The effect of MIpp was consistent for PCI and CABG (Pinteraction=0.61 for CV death and 0.76 for all-cause death). By multivariable analysis, MIpp remained significantly associated with both increased 3-year CV and all-cause mortality (Table).

3-year endpoint		MIpp KM event rate	No MIpp KM event rate	HR [95%CI]	P value
CV death	Unadjusted, all	9.3%	3.6%	2.77 (1.33, 5.80)	0.007
	- PCI	9.6%	4.1%	2.47 (0.76, 8.03)	0.13
	- CABG	9.2%	3.1%	3.20 (1.23, 8.36)	0.02
	Adjusted, all	-	-	2.97 (1.35, 6.56)	0.007
All-cause death	Unadjusted, all	13.8%	6.5%	2.33 (1.28, 4.23)	0.006
	- PCI	15.1%	7.6%	2.26 (0.91, 5.63)	0.08
	- CABG	13.0%	5.3%	2.59 (1.17, 5.76)	0.02
	Adjusted, all	-	-	2.62 (1.40, 4.89)	0.003

CONCLUSION In the EXCEL trial, MIpp was more common after CABG than PCI, and was strongly associated with increased 3-year mortality after controlling for potential confounders.

CATEGORIES CORONARY: PCI Outcomes

TCT-111

Outcomes of Percutaneous Coronary Intervention for Acute Myocardial Infarction in Female Patients



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BACKGROUND There has been considerable controversy about Percutaneous Coronary Intervention (PCI) outcomes between genders with multiple studies reporting either equal or inferior PCI-associated