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TCT-128 Saphenous Vein Graft Occlusion Following Native Vessel Chronic Total Occlusion Percutaneous Coronary Intervention

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	Damluji et al. https://doi.org/10.1016/j.jamjcard.2015.12.047	Flores-Umanzor et al. https://doi.org/10.1002/ccd.28815	Yan et al. DOI:10.1177/0003319719885301	Choi et al. DOI:10.4244/EJID-16-00737
Type of study	Randomized control trial (post hoc analysis of BARI-2D)	Cohort (prospective)	Cohort (retrospective)	Cohort (retrospective)
Country, Period	United States, 2001-2005	Spain, 2010-2014	China, 2007-2017	South Korea, 2003-2012
Study size (patients with DM and CTO), % male	972, 78	538, 48	2,361, 45	702, 46
Follow-up in months, mean age in years	60, 62.5	48, 68.5 ± 3.5	45, 60	46, 64.6
Type of stent used if PCI	DES or BMS	-	DES	DES
Exclusion criteria	Need for immediate revascularization, left main coronary disease, creatinine level >2.0 mg/dL, glycated hemoglobin level >13.0%, heart failure class III or IV, hepatic dysfunction, or previous PCI or CABG within the past 12 mo	No exclusion criteria	1) Patients who had a history of CABG; 2) patients who had acute myocardial infarction (MI) due to non-CTO vessels 1 mo before the study; 3) patients who had left main coronary artery disease; 4) patients who had histories of cancer or other diseases that could confuse the end points	History of previous CABG; history of cardiogenic shock or cardiopulmonary resuscitation; ST-segment elevation acute MI during the preceding 48 h
CTO location in percentages (actual prevalence in parentheses)				
Left anterior descending artery		OMT: 18 (60); ER: 24 (51)	OMT: 30.5 (36); ER: 28.0 (33)	OMT: 26.4 (84); ER: 38.5 (148)
Left circumflex artery		OMT: 19 (62); ER: 20 (42)	OMT: 28.0 (33); ER: 26.3 (31)	OMT: 36.5 (116); ER: 29.2 (112)
Right coronary artery		OMT: 52 (170); ER: 47 (100)	OMT: 41.5 (49); ER: 45.8 (54)	OMT: 56.3 (117); ER: 47.9 (184)

CONCLUSION We see a trend for better outcomes in Diabetic patients with CTO with ER compared with OMT. These findings were reinforced with statistical significance on subgroup analysis of OMT vs PCI.

CATEGORIES CORONARY: Complex and Higher Risk Procedures for Indicated Patients (CHIP)

TCT-128

Saphenous Vein Graft Occlusion Following Native Vessel Chronic Total Occlusion Percutaneous Coronary Intervention



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BACKGROUND The practice of occluding patent saphenous vein grafts (SVGs) after successful chronic total occlusion (CTO) percutaneous coronary intervention (PCI) of the native vessel has received limited study.

METHODS We analyzed baseline clinical and angiographic characteristics and procedural outcomes of 51 patients who following successful CTO PCI of the native vessel underwent attempted SVG occlusion between 2015 and 2022 at 14 centers.

RESULTS Mean patient age was 71 ± 8 years and 80% were men. The most common CTO target vessel was the right coronary artery (41%), followed by the left circumflex artery (35%). Retrograde crossing was the successful crossing strategy in 78% (n = 40) and the SVG was the collateral used for all the retrograde cases. Recurrent SVG failure (51%) was the most common reason for treating the native vessel instead of the SVG supplying the same vessel. Coils were used in 71% (n = 36) to occlude the SVG with a mean number of 1.9 ± 1.1 coils, and Amplatzer vascular plugs were used in 29% (n = 15) of the cases. All procedures were technically successful and the SVG was occluded completely (TIMI 0 flow) in 75% (n = 38) of the cases. Follow up was available for 38 patients (75%); during a mean follow up of 312 days, the incidence of target lesion failure was 5.4% (n = 2). There were no other associated periprocedural or in-hospital complications.

Table. Baseline clinical and angiographic characteristics and procedural outcomes of the study patients.

	N=51
Clinical characteristics	
Age (years)	71 ± 8
Male	41 (80.4%)
Diabetes Mellitus	24 (47.1%)
Hypertension	51 (100%)
Dyslipidemia	51 (100%)
Prior PCI	44 (86.3%)
LVEF (%)	53 ± 12
Reason for treating native vessel instead of SVG supplying the same vessel	
• Recurrent SVG failure	26 (51.0%)
• SVG PCI feasible but prefer treating native vessel	11 (21.6%)
• Chronic SVG occlusion	7 (13.7%)
• Aneurysmal SVG	5 (9.8%)
• SVG PCI failed	2 (3.9%)
Angiographic characteristics	
Successful Crossing Strategy	
• Antegrade wiring	8 (15.7%)
• Retrograde	40 (78.4%)
• Antegrade dissection and re-entry	3 (5.9%)
• None	0 (0%)
IVUS use	39 (76.5%)
J-CTO score	3.1 ± 0.9
PROGRESS-CTO score	1.7 ± 0.9
PROGRESS-CTO complication score	4.9 ± 1.4
Procedural outcomes	
Technical success	51 (100%)
MACE	0 (0%)
Procedure time (min)	206 (157, 283)
Fluoroscopy time (min)	71 (49, 97)
AK radiation dose (Gray)	2.7 (1.4, 3.7)
Contrast volume	197 (119, 254)

AK = air kerma; IVUS = intravascular ultrasound; J = Japan; LVEF = left ventricular ejection fraction; MACE = major adverse cardiac events; PCI = percutaneous coronary intervention; PROGRESS = Progressive Global Registry of Chronic Total Occlusion Interventions; SVG = saphenous vein graft.

CONCLUSION SVG occlusion after successful native vessel CTO PCI, is associated with favorable periprocedural and mid-term outcomes.

CATEGORIES CORONARY: Complex and Higher Risk Procedures for Indicated Patients (CHIP)

TCT-129

Symptom and Physiological Changes After Successful Chronic Total Occlusion Percutaneous Coronary Intervention



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