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TCT-126 Outcomes of Chronic Total Occlusion Percutaneous Coronary Intervention of the Left Anterior Descending Artery

Michael Megaly

Samer Zakhour

Judit Karacsonyi

Mir B. Basir

Katherine J. Kunkel

See next page for additional authors

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Authors

Michael Megaly, Samer Zakhour, Judit Karacsonyi, Mir B. Basir, Katherine J. Kunkel, Bahadir Simsek, Spyridon Kostantinis, Kambis Mashayekhi, David Kandzari, Emmanouil Brilakis, and Khaldoon Alaswad

CONCLUSION Presence of interventional collaterals is independently associated with higher success rates with a primary retrograde strategy in CTO PCI.

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

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TCT-126
Outcomes of Chronic Total Occlusion Percutaneous Coronary Intervention of the Left Anterior Descending Artery



Michael Megaly,¹ Samer Zakhour,² Judit Karacsonyi,³ Mir Basir,² Katherine Kunkel,⁴ Bahadir Simsek,⁵ Spyridon Kostantinis,⁵ Kambis Mashayekhi,⁶ David Kandzari,⁴ Emmanouil Brilakis,³ Khaldoon Alaswad²

¹Willis Knighton Heart Institute, Shreveport, Louisiana, USA; ²Henry Ford Hospital, Detroit, Michigan, USA; ³Minneapolis Heart Institute, Minneapolis, Minnesota, USA; ⁴Piedmont Heart Institute, Atlanta, Georgia, USA; ⁵Minneapolis Heart Institute Foundation, Minneapolis, Minnesota, USA; ⁶Heart Center Lahr, Wittnau, Germany

BACKGROUND Improvement of left ventricular ejection fraction (LVEF) after chronic total occlusion (CTO) percutaneous coronary intervention (PCI) has been modest in prior studies.

METHODS Our cohort included patients who underwent LAD CTO PCI at a single center (Henry Ford Hospital) from 2014 to 2021. We evaluate the change in LVEF after LAD CTO PCI using the paired *t* test in all patients, those with ischemic cardiomyopathy (CM), and those who underwent a viability test.

RESULTS From December 2014 to February 2022, a total of 237 LAD CTO PCI procedures were performed at Henry Ford Hospital (proximal LAD: 56.6%). In-hospital MACE occurred in 13 patients (5.5%; death: 1.3%). Landmark analysis after discharge showed an overall survival of the cohort was 92.7% and MACE-free survival of 85.0% over a median follow-up of 2 years. The median baseline EF was 50% (IQR 35%-55%). Only 51 patients had reduced baseline LVEF (40% or less). After a median follow-up of 9.2 months (IQR 3-28.6 months), there was a significant improvement in LVEF after LAD CTO PCI (mean 10.9%, 95% CI 7.1%-14.8%, *P* < 0.001). When limiting the analysis to patients who had ischemic cardiomyopathy, proximal LAD CTO PCI, and were on optimal medical therapy (n = 29), LVEF was significantly improved (mean increase of 14%, 95% CI 9.5-18.5%, *P* < 0.001) after a median follow-up period of 6.2 months (3-29.5 months).

CONCLUSION LAD CTO PCI was associated with a significant 10% improvement in LVEF in ICM patients and was more pronounced (14% improvement) in those who had proximal LAD treated and were on optimal medical therapy.

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

TCT-127
Medical Therapy Versus Early Revascularization in Diabetics With Chronic Total Occlusion of Coronary Arteries: A Meta-analysis and Systematic Review



Abdul Wazir,¹ Muhammad Khan,² Farhad Sami,³ F.N.U. Salman,⁴ Furqan Khattak,⁵ Jay Shah,¹ Madeeha Shafiqat,⁶ Amir Khan,¹ Abid Adil,¹ Maryam Sana,⁷ Muhammad Ahsan,⁸ Ghulam Mujtaba Ghuman,⁹ Hemindermeet Singh,¹⁰ Mohammed Taleb,¹¹ Syed Ali¹²
¹Mercy Saint Vincent Medical Center, Toledo, Ohio, USA; ²Mercy Saint Vincent Medical Center, Toledo, Ohio, USA; ³University of Kansas, Kansas City, Kansas, USA; ⁴Mercy Saint Vincent Medical Center, Toledo, Ohio, USA; ⁵Emory University, Atlanta, Georgia, USA; ⁶Mercy St Vincent Medical Center, Toledo, Ohio, USA; ⁷Khyber Medical College, Peshawar, Pakistan; ⁸University of Connecticut/Hartford Hospital, Hartford, Connecticut, USA; ⁹Mercy Health Saint Vincent Medical Center, Perrysburg, Ohio, USA; ¹⁰Mercy-Health St Vincent Medical Center, Perrysburg, Ohio, USA; ¹¹Toledo Cardiology Consultants, Holland, Ohio, USA; ¹²Toledo Cardiology Consultants, Perrysburg, Ohio, USA

BACKGROUND Management of chronic total occlusion (CTO) in diabetics is challenging, with recent trends toward early revascularization (ER; PCI + CABG). We hypothesized that ER improves morbidity and mortality in diabetics with CTOs as compared to optimal medical therapy (OMT).

METHODS Relevant articles were identified in major databases with pooled hazard ratios (HRs) using a random effects model with significant *P* < 0.05. Primary outcome was all-cause death with secondary outcomes cardiac death, repeat revascularization or repeat MI. 4 eligible articles, containing 2,248 patients were identified (1,252 in OMT and 1,196 in ER). Mean follow-up was 45-60 months.

RESULTS OMT group had a higher all-cause and cardiac mortality but results were insignificant. Risk for repeat MI was the same in both groups. Patients in OMT group had a higher risk for repeat revascularization. Subgroup analysis of OMT vs PCI demonstrated higher all-cause and cardiac mortality in the OMT group. The risk of repeat MI was low in the OMT group vs PCI. Risk for repeat revascularization was the same.

