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Volume 65, Issue 10S TCT@ACC-i2: Interventional Cardiology**CLINICAL OUTCOMES OF PATIENTS UNDERGOING PERCUTANEOUS CORONARY CHRONIC TOTAL OCCLUSION INTERVENTIONS: A WEIGHTED META-ANALYSIS OF 28,486 PATIENTS FROM 25 STUDIES**

Moderated Poster Contributions

TCT@ACC-i2 Moderated Poster Theater, Poster Hall B1

Saturday, March 14, 2015, 11:45 a.m.-11:55 a.m.

Session Title: TCT@ACC-i2: Interventional Cardiology I

Abstract Category: 33. TCT@ACC-i2: Coronary Intervention: CTO

Presentation Number: 2105M-17

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Objectives: We performed a weighted meta-analysis of the outcomes of successful vs. failed chronic total occlusion (CTO) percutaneous coronary intervention (PCI).

Background: There are no randomized-controlled trials on clinical outcomes following CTO PCI, limiting the available evidence to observational cohort studies.

Methods: We conducted a meta-analysis of studies published between 1990 and 2014 reporting long-term outcomes of successful vs. failed CTO PCI. We collected data on mortality, subsequent coronary artery bypass graft surgery (CABG), myocardial infarction (MI), major adverse cardiac events (MACE), angina, stroke, and target vessel revascularization (TVR) using random effects models.

Results: A total of 25 studies with 28,486 patients (29,315 CTO PCI procedures) were included. Procedural success was 71% (range 51 - 86.8%). During a weighted mean follow-up of 3.11 years, compared with failure, CTO PCI success was associated with lower mortality (odds ratio [OR] 0.54, 95% CI: 0.48-0.66, Figure 1), less recurrent angina (OR = 0.36, 95% CI 0.15, 0.85), lower risk for stroke (OR = 0.72, 95% CI 0.60, 0.88), less need for subsequent CABG (OR = 0.18, 95% CI 0.14, 0.22), and lower risk for MACE (0.55, 95% CI 0.43, 0.71). There was no difference in TVR (OR = 0.66, 95% CI 0.36, 1.23) or myocardial infarction (OR 0.76, 95% CI 0.54, 1.07).

Conclusion: Compared with failed procedures, successful CTO PCI procedures are associated with a lower risk of death, stroke and CABG, and less recurrent angina.

Figure 1: Forest plot for long-term all-cause mortality with successful versus failed CTO PCI.

