**Title:**

Gender Differences in Clinical Outcomes of Percutaneous Coronary Intervention for Chronic Total Occlusion: A Meta-Analysis

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**Background:**

The impact of gender is unclear in clinical outcomes of patients undergoing percutaneous coronary intervention (PCI) for chronic total occlusion (CTO). We performed an updated meta-analysis to understand it.

**Methods:**

We collected 16 studies from PubMed and Embase. Inclusion criteria: age > 18 years, studies with PCI for CTO having outcomes stratified by gender. Exclusion criteria: prior CABG. Clinical outcomes were in-hospital major cardiovascular events (MACE): bleeding, stroke, cardiovascular death; follow-up (≥ 6 months) all-cause mortality and myocardial infarction (MI); and procedural success.

Analysis was done using CRAN-R software using *meta* package. Mantel-Haenszel method with random effects model was used to calculate pooled odds ratio (OR) for each outcome with 95% confidence interval (CI) for statistical significance. Higgins I-squared (I2) statistic was used to evaluate heterogeneity (Fig 1).

**Results:**

We used men as an experimental group and women as a control group. Men did not show any significant superiority in terms of MACE (OR = 0.93; CI = 0.73 – 1.19, p = 0.59, I2 = 73.6%), follow-up all-cause mortality (OR = 0.86; CI = 0.63 – 1.18, p = 0.36, I2 = 50.3%), follow-up MI (OR = 0.8; CI = 0.6 – 1.05, p = 0.11, I2 = 0.0%) or procedural success (OR = 1.04; CI = 0.90 – 1.21, p = 0.53, I2 = 60.7%).

**Conclusion:**

Men and women undergoing CTO PCI have similar outcomes. Larger prospective data is needed to validate the findings.

**A: Major Adverse Cardiovascular Events B: Mortality**



**B: Myocardial Infarction D: Procedural Success**



**Fig 1: Clinical outcomes of MACE (A), mortality (B), MI (C), procedural success (D)**

MACE=Major adverse cardiovascular events, MI= myocardial infarction