

CARDIOVASCULAR PHARMACOLOGY

CRT-100.33

The Efficacy of “Get With the Guidelines - Heart Failure”: A Retrospective Analysis

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BACKGROUND Heart failure (HF) represents an immense burden to our patients and, consequently, to health-care expenditure. In an era of pay-for-performance initiatives, during which financial penalties are enforced for HF-related readmissions, reducing these occurrences has become of paramount importance to hospital systems throughout the United States. In an effort to improve heart failure management as well as hospital readmission rates, the American Heart Association (AHA) created a collaborative quality improvement program titled “Get With the Guidelines - Heart Failure (GWG-HF).” It is the aim of this study to evaluate the efficacy of this initiative in reducing readmissions.

METHODS A university medical center in a major U.S. city performed a retrospective chart review of randomly selected HF hospitalizations on a yearly basis for the GWG-HF initiative. These data were used to compare two years, 2012 and 2016; one in which the hospital’s GWG-HF performance was subpar (2012, N=416) and the other in which performance warranted a Gold-Standard award for adherence to guidelines (2016, N=301). GWG-HF “Achievement Measures” were selected as comparative variables between the two years.

RESULTS Of the GWG-HF “Achievement Measures,” post-discharge appointments displayed the most significant variance between the comparison groups: 97.3% in 2016 and only 74.6% in 2012 ($p < 0.0001$, 95% CI 17.1-28.1). Additionally, evidence-based beta blocker use exhibited a statistically significant difference: 99.2% in 2016 and 91.8% in 2012 ($p = 0.0031$, 95% CI 2.6-12.2). Measuring the LV function and ACEi/ARB/ARNi use were achievement measures with statistically insignificant differences in the two populations.

CONCLUSION The GWG-HF “Achievement Measures” of scheduling post-discharge appointments, and utilizing evidence-based beta blockers were better enforced during a period with fewer 30-day readmissions. This correlation does not signify causation, but lends to the likelihood that compliance with GWG-HF ultimately reduces HF-related readmissions.

CHRONIC TOTAL OCCLUSIONS

CRT-100.37

Role of Pre-CTA On Procedural Success of CTO PCI: Systematic Review And Meta-analysis

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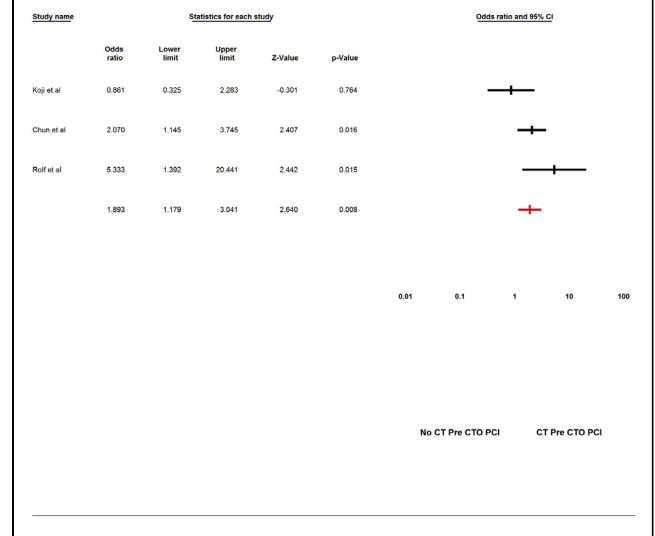
BACKGROUND Revascularization of coronary chronic total occlusions (CTO) can improve symptoms of angina, quality of life and left ventricular systolic function. CTO PCI is often limited by technical challenges related to anatomical proximal and distal vessel ambiguity. Cardiac CTA has an established role in structural heart interventions such as TAVR. However, the role of cardiac CTA to aid in revascularization for CTO is understudied. Our aim was to conduct a systematic review and meta-analysis to study the effect of pre-procedural cardiac CTA on the success of CTO revascularization.

METHODS We searched three databases (Ovid MEDLINE, EMBASE, EBM reviews) from January 1, 1947, to December 31, 2016. Studies reporting on the use of computed tomography (CT) to aid in CTO revascularization were included. Case reports and case series were excluded.

RESULTS We identified 424 articles, and using the Preferred Reporting Items for Systematic Reviews and Meta-analyses method, 3 articles met prespecified inclusion criteria. A meta-analysis showed that pre-procedural cardiac CTA significantly improved procedural success rate (odds ratio 1.893, 95% confidence interval 1.179 to 3.041, $Z = 2.640$, $p < 0.05$).

CONCLUSION The use of pre-procedural CT in planning CTO revascularization significantly improved the success of CTO revascularization.

Effect of CT Pre CTO PCI on procedural success



COMPLEX CORONARY INTERVENTIONS

CRT-100.40

Incremental Predictive Benefit Of Pre-procedural CTA In Predicting Successful CTO PCI: Systematic Review

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BACKGROUND Percutaneous revascularization of coronary chronic total occlusions (CTO) is technically more difficult but can benefit a select patient population. The angiographic JCTO score is validated to predict antegrade CTO recanalization success. This score consists of four components, namely the presence of a blunted proximal cap, occlusion length, presence of calcification and angulation of more than 45 degrees. We sought to determine if pre-PCI CTA could add incremental predictive value to this score.

METHODS We searched three databases (Ovid MEDLINE, EMBASE, EBM reviews) from January 1, 1947, to December 31, 2016. Studies reporting on the use of computed tomography (CT) to aid in CTO revascularization were included. Case reports and case series were excluded.

RESULTS We identified 424 articles, and using the Preferred Reporting Items for Systematic Reviews and Meta-analyses method, 32 articles met prespecified inclusion criteria. Due to heterogeneity of the CTO patient population, it was deemed inappropriate to perform a meta-analysis for summary measures/effect size. Thirteen of 32 studies reported the presence of a blunted stump as a predictor of failure. Twenty-one of 32 studies reported occlusion length as a predictor of failure. Twenty eight of 32 studies reported severity of calcification as predictor of successful CTO recanalization. The degree of calcification was found to be better assessed with CTA than with coronary angiography. Eight of 32 studies reported steep angulations as a predictor of successful CTO recanalization. In addition, 3 of 32 studies identified CT derived linear intrathrombus enhancement, negative remodelling and the presence of multiple occlusions as novel predictors of success, uniquely identified by CTA.

CONCLUSION This systematic review shows the validity of JCTO variables as determined by pre-procedural CTA. In addition to these variables, CT can also uniquely identify additional variables that can predict successful CTO recanalization.