

编号: YY004-20190923001

标题: Long-Term Outcomes of Drug-Eluting Stent Implantation After Rotational Atherectomy for Left Main Coronary Artery Bifurcation Lesions

简介: The clinical outcomes of drug-eluting stent (DES) implantation after rotational atherectomy (RA) for complex left main coronary artery (LMCA) bifurcation lesions remain unclear. Among 1,809 patients retrospectively enrolled in the Assessing Optimal percutaneous coronary Intervention for LMCA Registry, we identified 1,199 patients with LMCA bifurcation lesions treated by crossover stenting with DES for the main vessel. The study population was divided according to the use of RA. The patients in the RA group were further subdivided into the 2 subgroups on the basis of the stenting approach. The rates of periprocedural myocardial infarction and in-hospital death in the RA group were comparable to those in the non-RA group. The cumulative 5-year incidences of all-cause death and target lesion revascularization (TLR) were significantly higher in the RA group than those in the non-RA group. However, after adjusting confounders, the excess risks of the RA group relative to the non-RA group for all-cause death and TLR were no longer significant (hazard ratio 0.95, 95% confidence intervals 0.59 to 1.52, $p = 0.83$, and hazard ratio 1.46, 95% confidence intervals 0.82 to 2.60, $p = 0.20$, respectively). In the RA group, the cumulative 5-year incidences of all-cause death and TLR were markedly higher in the 2-stent subgroup than in the 1-stent subgroup (58.1% vs 26.0%, $p = 0.001$, and 43.0% vs 16.3%, $p = 0.001$, respectively). In conclusion, DES implantation after RA was a safe and feasible strategy in treating those patients with complex LMCA bifurcation lesions. In this strategy, the 2-stent approach was associated with markedly worse 5-year clinical outcomes than the 1-stent approach.

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编号: YY004-20190923002

标题: Effect on Outcomes: Infections Complicating Percutaneous Coronary Interventions in Patients ≥ 80 Years of Age

简介: Data on the prevalence of infections in patients who underwent percutaneous coronary intervention (PCI) and their impact on outcomes are scarce. In this study, a total of 644 patients ≥ 80 years of age who underwent PCI were stratified according to the presence/absence of infections requiring antibiotic therapy. The primary end point was major adverse cardiovascular events (MACE) after discharge, a composite of all-cause mortality, nonfatal myocardial infarction, and rehospitalization for heart failure. Median follow-up was 1.2 (interquartile range 0.1 to 3.4) years. Of the 644 patients, 186 (28.9%) had infections during index hospitalization, with 84 (13%) and 59 (9.2%) patients having pneumonia and urinary tract infections, respectively. Patients with infections were older, more often women, and had an increased prevalence of atrial fibrillation and congestive heart failure. Infections prolonged hospital stay (10 [7 to 16] vs 5 [3 to 7] days, $p < 0.001$), but were not related to rates of MACE (20% vs 19%, adjusted hazard ratio [HR] 1.41, 95% confidence intervals 0.84 to 2.38, $p = 0.20$). Pneumonia was significantly associated with increased rates of MACE (27% vs 18%, adjusted HR 2.19, 95% confidence intervals 1.23 to 3.91, $p = 0.008$) and rehospitalization for heart failure (17% vs 10%, adjusted HR 2.66 (1.25 to 5.63, $p = 0.01$), whereas urinary tract infections were not. In conclusion, concomitant infections are frequent in patients ≥ 80 years of age who underwent PCI, and associated with an increased risk of adverse events when affecting

the respiratory system.

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编号: YY004-20190923003

标题: Prevalence of Coronary Vasospasm Using Coronary Reactivity Testing in Patients With Spontaneous Coronary Artery Dissection

简介: Spontaneous coronary artery dissection (SCAD) is an important cause of myocardial infarction and sudden cardiac death, particularly in young to middle-aged women. Coronary vasospasm is another condition believed to be associated with SCAD; however, this has only been shown in isolated case reports to date. We sought to examine the association of SCAD and coronary vasospasm by reporting the experience of coronary vasospasm testing in patients with a history of previous SCAD in a large, tertiary referral center. We conducted a single-center retrospective review of patients with history of SCAD confirmed by angiography who received provocative testing using ergonovine in the Cleveland Clinic cardiac catheterization lab from January 1990 to December 2016. Positive vasospasm was defined as: (1) total or subtotal occlusion of at least 1 major coronary artery induced by administration of ergonovine and (2) resolution of said occlusion with the administration of nitrates. Patients with history of strong trauma to the chest and iatrogenic dissection (e.g., catheter-induced) were excluded from the study. We identified 11 patients who satisfied all inclusion criteria. All participants were women and the mean age was 47 years: 73% received screening for fibromuscular dysplasia and of those, 38% were found to have the diagnosis. Only 1 of 11 patients had a positive vasospasm test in the setting of ergonovine administration in the catheterization lab. In conclusion, we found a low prevalence of coronary vasospasm in individuals with confirmed previous SCAD.

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编号: YY004-20190923004

标题: Characteristics and Outcomes of Patients With Cardiogenic Shock Utilizing Hemodialysis for Acute Kidney Injury

简介: In the setting of cardiogenic shock (CS), impaired biventricular function can cause acute decrease in renal function via reduced renal perfusion and increased renal venous pressure. We sought to analyze the characteristics and outcomes of patients hospitalized with CS who utilized renal replacement therapy (hemodialysis) for acute kidney injury (AKI-HD). We utilized data from the National Inpatient Sample to calculate national rates of in-hospital mortality, use of temporary mechanical support, vascular injury requiring surgery, length of stay (LOS) and hospitalization cost from 2010 to September 2015. We compared the in-hospital outcomes between CS with AKI-HD and a propensity score-matched group without AKI-HD. We identified 6,076 hospitalizations (weighted n = 24,272) with CS and AKI-HD and 76,878 (weighted n = 378,553) with CS not AKI-HD. Among these cases 48.1% (n = 39,403, weighted n = 193,746) had ST elevation myocardial infarction as the cause of CS. Patients with CS and AKI-HD had higher comorbidity burden and they were also more likely to receive mechanical circulatory support device (absolute standardized difference >10% for all comparisons) compared with CS patients without AKI-HD. After matching 4,457 cases

for patient-level and hospital-level characteristics, CS with AKI-HD was associated with significantly higher in-hospital mortality (75.74% vs 51.58%, $p < 0.001$), use of temporary mechanical support (24.0% vs 19.3%, $p < 0.001$), LOS (21.4 vs 14.4 days, $p < 0.001$) and cost (\$80,406 vs \$52,833, $p < 0.0001$). AKI-HD occurred in approximately 6% of patients with CS in years 2010 to 2015 and was associated with significantly increased in-hospital morbidity and mortality, LOS, and cost.

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编号: YY004-20190923005

标题: Comparison of QT Interval Measurement Methods and Correction Formulas in Atrial Fibrillation

简介: Antiarrhythmic drugs used in atrial fibrillation (AF) cause QT prolongation and are associated with torsades de pointes, a deadly ventricular arrhythmia. No consensus exists on the optimal method of QT measurement or correction in AF. Therefore, we compared common methods to measure and correct QT in AF to identify the most accurate approach. We identified patients who had electrocardiograms done at Stanford Hospital (Stanford, California) between January 2014 and October 2016 with conversion from AF to sinus rhythm (SR) within a 24-hour period. QT intervals were determined using different measurement methods and corrected using the Bazett's, Framingham, Fridericia, or Hodges formulas for heart rate (HR). Comparisons were made between QT in a patient's last instance of AF to SR. Computerized measurements were taken from 715 patients. Manual measurements were taken from a 50-patient subset. Bazett's formula produced the longest corrected QT in AF compared with other formulas ($p < 0.005$). Measuring QT as an average over multiple beats resulted in a smaller difference between AF and SR than choosing a single beat. Determining QT from a 5-beat average resulted in a QTc that was 19.0 ms higher (interquartile range 0.30 to 43.7) in AF than SR. After correcting for residual effect of HR on QTc, there was not a significant difference between QTc in AF to SR. In conclusion, measuring QT over multiple beats produces a more accurate measurement of QT in AF. Differences between QTc in AF and SR exist because of imperfect HR correction formula and not due to an independent effect of AF.

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