RESULTS Two hundred forty-nine patients had LMS intervention during the study period. All non-emergency cases were discussed by the heart team. Seventy-seven percent (n=192) were male. Mean age 70 ± 12 years. Thirty-one percent of cases were elective, 44% NSTEMI, 25% STEMI. Seventy-seven percent of procedures were performed trans-radially. Anatomical distribution: 19% ostial, 31% shaft and 50% bifurcation. Additional intra-coronary imaging was used in 55%. Ninety-two percent of patients had DES. Twenty-two percent of patients had severe LV impairment pre-procedure and 13 % were in cardiogenic shock on presentation. 4.8% had acute LMS occlusion and 0.4 % had chronic occlusion. Rotablation was used in 16%. Thirty-five patients (14%) required IABP support. PCI techniques included: Culotte 19%, 2-stent crush in 2%, T-stenting in 11% and single stent in 68%. Seventy-three percent had PCI on additional lesions at the same setting. Periprocedural complications included: coronary perforation in 1.2 %, side branch occlusion in 3.2%, heart block requiring pacing in 0.8%, and cardiogenic shock induced by procedure in 2.4%. 98.4% of procedures were successful. No patients required emergency transfer for CABG. There were 25 (10%) in-hospital deaths. Sixty-eight percent of in-hospital deaths occurred in patients undergoing primary PCI for STEMI. Seventy-two percent of patients who died were in cardiogenic shock at presentation. Twelve-month MACE was 19.6%. Death occurred in 14%, MI in 2.4%, TVR in 2.4% and stroke in 0.8% (ischemic etiology).

CONCLUSION These results highlight the safety and efficacy of unprotected LMS PCI in a non-surgical centre.

MULTIVESSEL DISEASE

CRT-100.53

Identification Of Candidates For Coronary Artery Bypass Grafting In Patients With Multivessel Disease Admitted With STEMI: A Single-center Descriptive Study

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BACKGROUND The management of multivessel coronary artery disease (MVD) in STEMI setting is under debate. Complete surgical revascularization with CABG is not usually considered due to the need for emergency revascularization of the culprit vessel, which is performed faster percutaneously. Many patients who are good candidates for CABG initially are not considered due to high risk of bleeding with DAPT and reduction of the anatomical complexity after the primary PCI. The use of short half-life antithrombotic therapy, i.e., GP IIb/IIIa inhibitors or cangrelor, could make possible the realization of CABG during hospitalization in selected patients after a provisional percutaneous revascularization without stent implantation of the culprit vessel. We sought to identify the percentage of patients with MVD in STEMI setting who could have been candidates for CABG.

METHODS We evaluated all patients admitted with STEMI in a tertiary center from April 2014 to October 2016. Those patients with TIMI flow < 3 in the culprit vessel, additional stenosis > 50% in an epicardial vessel or sidebranch > 2 mm were selected. We analyzed epidemiological variables, surgical risk scores and Syntax-I and Syntax-II scores. All patients selected were discussed in a heart-team post hoc where an interventional cardiologist (RRO) and a cardiothoracic surgeon (JLM) agreed on the best management.

RESULTS Three hundred seventy-nine patients were admitted due to STEMI in the aforementioned period. Seventy-two (19.0%) accomplished MVD criteria (65 +/- 13 years; 81.9% male; 29.2% diabetics; Euroscore 9.9 +/- 7.5; Euroscore-II 2.6 +/- 1.9). Syntax-I score was 19 +/- 13 points and Syntax-II score recommended CABG in 12 patients (16.7%) and heart-team discussion in 60 (83.3%). Post hoc heart-team discussion concluded that 21 (29.2%) patients could have been good candidates for complete revascularization with CABG.

CONCLUSIONS After a post hoc heart-team discussion, around 30% of patients admitted with STEMI and MVD could have been candidates for CABG. A provisional percutaneous revascularization without stent implantation and the use of short half-life antithrombotic therapy could make possible the realization of CABG during hospitalization in selected patients.

CRT-100.54

Culpritvessel-only Versus Multi-vessel Percutaneous Coronary Intervention In Patients With Cardiogenic shock complicating ST-segment-elevation Myocardial Infarction outcomes In Short Term Mortality: An Updated Meta-analysis
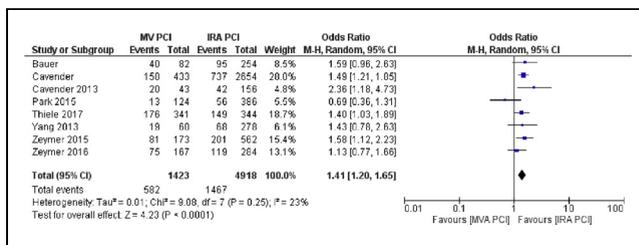
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BACKGROUND In patients who have acute myocardial infarction with cardiogenic shock, early revascularization of the culprit artery by means of percutaneous coronary intervention (PCI) improves outcomes. However, the majority of patients with cardiogenic shock have multi-vessel disease, and whether PCI should be performed immediately for stenosis in non-culprit arteries is controversial. The optimal revascularization strategy in patients with multi-vessel disease presenting with cardiogenic shock complicating ST-segment-elevation myocardial infarction remains unknown.

METHODS AND RESULTS Databases were searched from 1999 to November 2017. Studies comparing immediate/single-stage multivessel percutaneous coronary intervention (MV-PCI) versus culprit vessel-only PCI (CO-PCI) in patients with multi-vessel disease, ST-segment-elevation myocardial infarction, and cardiogenic shock were included. Primary end point was short-term (in-hospital or 30-day) mortality. The meta-analysis included 8 studies and 6341 patients (1423 MV-PCI and 4918 CO-PCI). There was a significant difference in short-term mortality with MV-PCI versus CO-PCI (odds ratio [OR], 1.41; 95% confidence interval [CI], 1.20-1.65; P<0.05).

CONCLUSIONS This updated meta-analysis, which includes the multicenter randomized control trial CULPRIT SHOCK, suggests that in patients with cardiogenic shock complicating ST-segment-elevation myocardial infarction, there is a significant benefit in short-term mortality with CO-PCI compared with MV-PCI. Given the limitations of observational data, more randomized trials are needed to validate these findings.

Study or Subgroup	MV PCI Events	Total	IRA PCI Events	Total	Weight	Odds Ratio M-H, Random, 95% CI
Bauer	40	82	95	254	8.5%	1.59 [0.96, 2.63]
Cavender	150	433	737	2654	20.0%	1.49 [1.21, 1.85]
Cavender 2013	20	43	42	156	4.8%	2.36 [1.18, 4.73]
Park 2015	13	124	56	386	5.5%	0.69 [0.36, 1.31]
Thiele 2017	176	341	149	344	18.7%	1.40 [1.03, 1.89]
Yang 2013	19	60	68	278	6.1%	1.43 [0.78, 2.63]
Zeymer 2015	81	173	201	562	15.4%	1.58 [1.12, 2.23]
Zeymer 2016	75	167	119	284	13.1%	1.13 [0.77, 1.66]
Total (95% CI)		1423		4918	100.0%	1.41 [1.20, 1.65]
Total events	582		1467			

Heterogeneity: Tau² = 0.01; Chi² = 9.08, df = 7 (P = 0.25); I² = 23%
Test for overall effect: Z = 4.23 (P < 0.0001)

Favours [MVA PCI]   Favours [IRA PCI]

OTHER

CRT-100.67

The Correlation Between The Extent Of Mitral Annulus Calcification And The Severity Of Coronary Artery Disease

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BACKGROUND Despite improvements in risk scoring of severity of CAD, there are still low-risk patients who experience CHD events.

AIM OF STUDY To evaluate the correlation between the severity of Mitral Annular Calcification and the extent of CAD.

PATIENTS Fifty patients with suspected coronary artery disease and less than 65 years, referred for diagnostic coronary angiography for evaluation of chest pain between January 2015 and April 2017. The study subjects were divided into: Group I - Twenty patients with normal aortic and mitral valves; Group II -Thirty patients with mitral annulus calcification without congenital or rheumatic or dialysis were enrolled.

METHODS After consent, patients were subjected to history, clinical evaluation, lab, and ECG. Thickness of mitral leaflets and their motion were assessed. The severities of coronary artery disease were graded according to Friesinger score, which ranges from 0 to 15. Each of the three main coronary arteries is scored separately from 0 to 5. Score 0: No arteriographic abnormality, Score 1: Trivial irregularities (lesion from 1-29%), Score 2: Localized 30-68% luminal narrowing, Score 3: Multiple 30-68% luminal narrowing of same vessel, Score 4: 69-100% luminal narrowing without 100% occlusion of proximal segments, and Score 5: Total obstruction of a proximal segment of a vessel.

RESULTS Friesinger score is significantly higher in Group II (9.53 ± 2.36) compared to Group I (2.5±2.2) (P < 0.001). No significant difference between the groups in patient characteristics. Angiography showed a higher prevalence of CAD in patients in group II than in group I (88% vs. 68%, p = 0.0004), and a higher prevalence of left main CAD (14% vs. 4%, p = 0.009) and triple vessel disease (54% vs. 33%, P = 0.002).

CONCLUSION The association of mitral annulus calcification is strongly positively correlated with extend and severity of CAD.
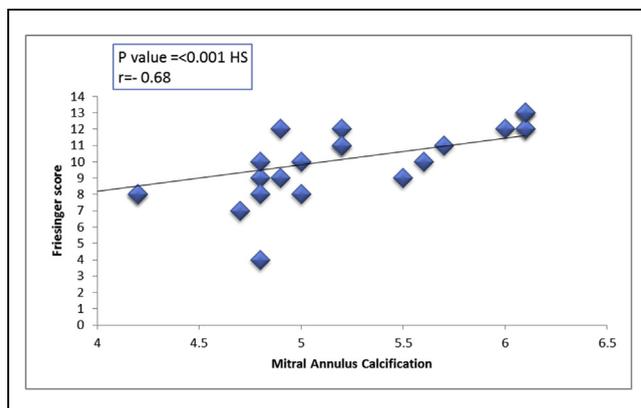
CRT-100.68

Clinical Presentation and Outcomes of In-stent Restenosis in Second-Generation Drug-Eluting Stents Compared to First Generation Drug-Eluting Stents

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BACKGROUND Second-generation drug-eluting stents (DES) have demonstrated superiority over first-generation DES with respect to reduction in MACE and target lesion revascularization (TLR). The aim of this study was to compare the clinical presentation, lesion characteristics, and outcomes of first-generation DES-ISR to second-generation DES-ISR.

METHODS A retrospective analysis was performed on patients presenting with DES-ISR from 2003 to 2016. Baseline characteristics and prior stent history were obtained. The groups were stratified based on generation of failed DES.

RESULTS One thousand sixty-eight patients received treatment for DES-ISR. Seven hundred fifty-five (71%) had ISR of first-generation DES and 313 (29%) had ISR of second generation DES. There was no difference in baseline demographics between the groups. The second-generation DES-ISR had more diabetes mellitus (55% vs. 46%, p<0.01) and more renal insufficiency (26% vs. 18%, p=0.02). There was no significant difference in complexity of lesions between the groups, but failed second-generation DES were more often used initially to treat prior ISR (28% vs. 20%, p<0.01). There was no difference in presentation of stable angina or unstable angina, but the second-generation DES-ISR group presented more often with myocardial infarction (MI) (14% vs. 7%, p<0.01). There was higher rate of all-cause mortality at one year in second-generation DES (10% vs. 6%, p<0.01) but no difference in composite of death, Q-wave MI, and TLR (23% vs 19%, p=0.13).

CONCLUSION ISR of DES remains a challenge. Second-generation DES have not reduced the incidence of acute coronary syndrome in ISR, and myocardial infarction is actually higher. The reason for such differences may be related to worse comorbidities and higher utilization of second-generation DES to treat recurrent ISR, which likely contributes to differences in all-cause mortality.
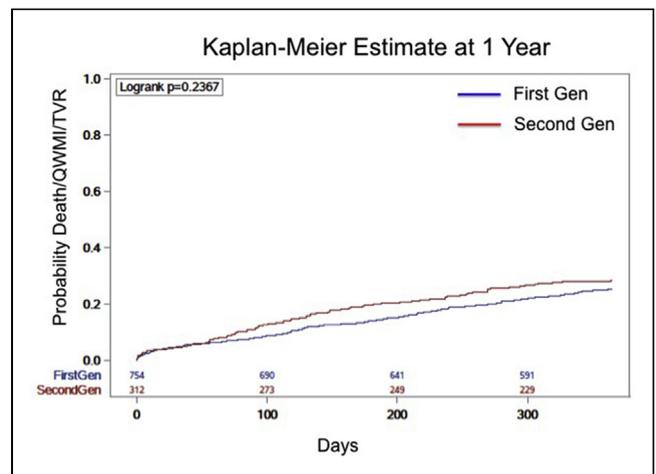
CRT-100.69

Cardiac Patients More Likely to Survive to Discharge after Return of Spontaneous Circulation Following In-Hospital Arrest

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BACKGROUND There are limited data on in-hospital cardiac arrest, and hence we don't understand the predictors of outcome in this cohort. This study aims to understand how the admitting diagnosis affects the survival from cardiac arrest and then survival-to-discharge after return of spontaneous circulation.

METHODS Institutional review board of the Cleveland Clinic approved the retrospective cross-sectional study for patients who had in-hospital cardiac arrest from March 2015 to June 2016 at Cleveland Clinic-Fairview Hospital. Cardiac arrest/code blue (CA) protocol was activated on 153 patients during the study period of 15 months. Out of 153 patients, 21 were false activation and they were excluded. Data were collected using the electronic medical record for events before, during and after the CA. SPSS was used for statistical analysis.

RESULTS A total of 132 patients were included in the study. Demographic distribution showed median age of 69.5 years. 59% (78/132) were males, 51% (67/132) had diabetes, 78% (103/132) had