Complete versus culprit only revascularization in STEMI: a single centre experience

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Introduction
Multiple vessel disease in STEMI is not uncommon, approximately half of STEMI patient presented with multiple vessel disease. In STEMI with multiple vessel disease that is not in cardiogenic shock, it is unclear whether complete or culprit only revascularization achieve better clinical outcome. Several trials, such as PRAMI, The CvLPRIT study, DANAMI-3 PRIMULTI, have shown mortality benefit favoring complete revascularization. Yet in a lack of large scale randomized control trial, there is no strong evidence.

Purpose
To evaluate whether complete or culprit only revascularization in STEMI with multi-vessel disease (non-cardiogenic shock) achieve better clinical outcome

Method
A retrospective review of patient with STEMI and multiple vessel disease (defined as angiographic stenosis 70% and more than single vessel involvement) that is not cardiogenic shock. Data was collected in a local hospital in the period of 1/2013 to 12/2017. The end-point follow-up was up to 12 months. Primary outcome was major adverse cardiac event (MACE), comprising all-cause mortality, recurrent myocardial infraction, heart failure, ventricular arrhythmia. The outcome variable was analyzed by time-to-first event survival analysis, Cox proportional hazard models was used to estimate hazard ratios and 95% confidence interval. Data was analyzed by software SPSS.

Result
A total number of 112 patients were included in the study. There are 69 patient in culprit group while 43 patient in complete group. In culprit only group, 17 out of 69 patients developed MACE (24.6%) while in complete revascularization group, 11 out of 43 patients had MACE (25.6%) (Hazard ratio: 0.942; 95% confidence interval 0.441 to 2.011; p = 0.877).

Conclusion
There is no significant difference in MACE in complete revascularization and culprit only group in STEMI patient and multiple vessel disease (non-cardiogenic shock). Our result differs from previous trials, possibly due to sample size and study design. In view of heterogeneity of study design in different trials and absence of solid clinical evidence, further study is needed to determine the optimal strategy for revascularization in patient with STEMI and multiple vessel disease (non-cardiogenic shock).