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**THREE YEARS CLINICAL OUTCOMES IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION UNDERGOING SINGLE VERSUS MULTIPLE VESSEL PERCUTANEOUS CORONARY INTERVENTION**

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**Background** In patients with acute myocardial infarction (AMI), percutaneous coronary intervention (PCI) for no culprit vessel is not recommended by the guidelines. However, in patients with AMI and severe multivessel disease, simultaneous PCI of both culprit and no culprit lesions may reduce ischemic burden, whereas the long term clinical outcome in patients with AMI undergoing multivessel PCI is lacking.

**Aims** The aim of our study is to investigate the long term prognosis in patients with AMI undergoing single vessel versus multivessel PCI.

**Methods** The documents of 1540 consecutive patients with AMI undergoing PCI from 2005 to 2008 were retrospectively screened. Patients were followed up either by telephone or outpatient visits. Clinical follow-up data were collected in 79% (n=1217) of the overall cohort.

**Results** Culprit-vessel PCI was done in 859 patients, while 358 patients had both culprit- and no culprit-vessel PCI. Median clinical follow-up duration was 35.0 months (IQR 24.2–46.3). Age, baseline comorbidities, ejection fraction and periprocedural medications were similar between two groups. In-hospital mortality as well as vascular and bleeding complication rate was similar. During 3-years clinical follow up, Patients with multivessel PCI were associated with significantly increased overall major adverse cardiac event rate (12.2% vs 17.3%,  $p=0.019$ ), which was largely driven by significantly higher incidence of target vessel revascularisation (4.5% vs 7.8%,  $p=0.022$ ). Whereas all cause mortality (4.1% vs 5.0%,  $p=0.458$ ), and non-fatal myocardial infarction (3.6% vs 4.5%,  $p=0.478$ ) were comparable in patients with single vessel versus multivessel PCI. Survival analysis revealed no significant differences in the composite incidence of death and myocardial infarction.

**Conclusion** All cause mortality, myocardial infarction, in-hospital vascular, and bleeding complications for multivessel PCI were no worse than for single-vessel PCI in patients with AMI, whereas target vessel revascularisation risk was increased with multivessel PCI.