

## Risk Factors of Mortality in Patients with Previous Percutaneous Coronary Intervention Undergoing Coronary Artery Bypass Grafting

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### Background:

Patients undergoing coronary artery bypass grafting (CABG) with a history of previous percutaneous coronary intervention (PCI) had significantly elevated perioperative risk for mortality compared to patients undergoing CABG without previous PCI.

### Aim and Objectives:

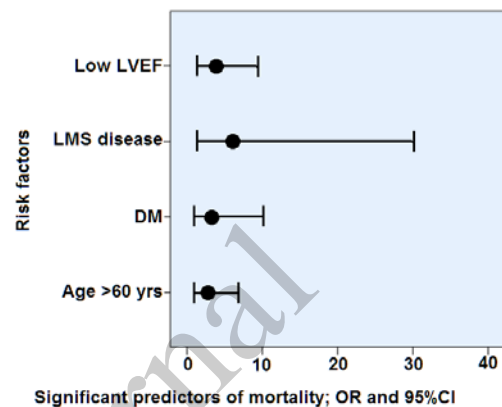
Evaluate the significant risk factors of mortality after isolated first-time CABG in patients with previous PCI.

### Methods:

This retrospective multicenter study reviewed medical records and database for adult patients who had isolated on-pump CABG with a history of previous PCI, between 2012 and 2022. Multivariate logistic regression was used to assess the risk factors of in-hospital mortality.

### Result:

The study included 498 patients with a mean age of  $55.28 \pm 7.84$  years and a predominance of male gender (85.1%). The majority of patients had previous PCI on the left anterior descending (50.8%) and de-novo stenosis (65.3%). The mortality rate was 4%. In univariate analysis, the significant risk factors of mortality were age >60 years ( $P=0.025$ ), diabetes mellitus ( $P=0.029$ ), COPD ( $P=0.032$ ), peripheral vascular disease ( $P=0.016$ ), left main stem (LMS) disease ( $P<0.001$ ), and low ejection fraction ( $P=0.008$ ). In multivariate analysis (backward stepwise logistic regression), the significant prognostic factors were age >60 years (Odds ratio (OR): 2.60), diabetes mellitus (OR: 3.22), LMS disease (OR: 6.11), and low ejection fraction (OR: 3.53).



### Conclusion:

PCI-specific factors do not affect the mortality rate after CABG in patients with previous PCI. Common cardiovascular risk factors including old age, diabetes mellitus, presence of LMS disease, and low ejection fraction can be used for risk stratification in such group of patients. Risk factors for mortality after CABG with previous PCI did not differ from commonly reported risk factors in patients who underwent CABG without a history of PCI, thus CABG should not be excluded as a vital option for repeat revascularization.

### Keywords:

Myocardial revascularization, percutaneous coronary intervention, predictors, mortality