Performance of the GRACE 2.0 Score in Patients with Type 1 and Type 2 Myocardial Infarction

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Introduction The Global Registry of Acute Coronary Events (GRACE) score was developed to evaluate risk in patients with myocardial infarction. However, its performance in type 2 myocardial infarction is uncertain.

Methods In two cohorts of consecutive patients with suspected acute coronary syndrome from ten hospitals in Scotland (n=48,282) and a tertiary care hospital in Sweden (n=22,589), we calculated the GRACE 2.0 score to estimate death at one year. Discrimination was evaluated by the area under the receiver-operator-curve (AUC), and compared for those with an adjudicated diagnosis of type 1 and type 2 myocardial infarction using DeLong’s test.

Results Type 1 myocardial infarction was diagnosed in 4,981 (10%) and 1,080 (5%) patients in Scotland and Sweden, respectively. At one year, 720 (15%) and 112 (10%) patients died with an AUC for the GRACE score of 0.83 (95% confidence interval [CI] 0.82 to 0.85) and 0.85 (95% CI 0.81 to 0.89). Type 2 myocardial infarction occurred in 1,121 (2%) and 247 (1%) patients in Scotland and Sweden respectively, with 258 (23%) and 57 (23%) deaths at one year. The AUC was 0.73 (95% CI 0.70 to 0.77) and 0.73 (95% CI 0.66 to 0.81) in type 2 myocardial infarction, which was lower than for type 1 myocardial infarction in both cohorts (P<0.001 and P=0.008, respectively).

Conclusions The GRACE score provided good discrimination for all-cause death at one year in patients with type 1 myocardial infarction, and moderate discrimination for those with type 2 myocardial infarction.

Conflict of Interest None

Should Fractional Flow Reserve Follow Angiographic Visual Inspection to Guide Preventive PCI in STEMI?

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Introduction Evidence of the benefit of preventive percutaneous coronary intervention (PCI to non-infarct arteries) in patients with ST-elevation myocardial infarction (STEMI) has increased with the publication of several randomised trials, but marked variation in the magnitude of benefit on hard outcomes has been observed between trials. One possible explanation for the difference in results is the way non-infarct artery stenoses are selected for preventive PCI. We aimed to quantify the effect of preventive PCI on cardiac death and non-fatal myocardial infarction (MI) according to whether the decision to carry out preventive PCI was based on angiographic visual inspection (AVI alone) or AVI plus Fractional Flow Reserve if AVI showed significant stenosis (AVI plus FFR).

Methods Randomised trials comparing preventive PCI with no preventive PCI in STEMI without shock were identified by a systematic literature search and categorised according to whether they used AVI alone or AVI plus FFR to select patients for preventive PCI. Trials that used both methods...