Rate of Sudden Death in Myocardial Infarction Survivors, a Population-Based Investigation

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Background: By using the National Health Insurance claim data of Taiwan, we investigated the sudden death rate and other outcomes in patients with myocardial infarction (MI) and the predictors of different outcomes. Methods: From the nation-wide data, we identified 7776 patients with MI between years 1998 and 2008, and followed them till 2008. The rates of life threatening arrhythmia, sudden death, defibrillator implantation for 2nd prevention (outcome 1) and outcome 1 plus cardiac death (outcome 2), heart failure hospitalization were calculated. Revascularization strategies and drug treatments were used to predict outcome 2. Results: Of the 7776 patients, 311 (4%) patients reached outcome 1 and 755 (9.8%) outcome 2 at mean 5-year follow up. 1227 (16.9%) patients had ever been admitted with chief diagnosis of heart failure. 3% of the patients died in the initial MI event. The sudden death rate was around 2 percent if patients survive the myocardial infarction. Revascularization (either by bypass surgery or percutaneous coronary intervention) increase, but statins, aspirin, clopidogrel, and beta-blockers significantly reduced outcome 2 rates. Conclusions: From this nationwide study, we found that, among MI patients, the rate of sudden death was lower than that in western population. Medication would improve survival of MI patients.

Keywords: myocardial infarction, sudden death, ventricular tachycardia