Clinical Science

Acute Myocardial Infarction: Electrocardiographic, Anatomic, Comorbid, and Treatment Factors Affecting Outcomes

Subspecialty: Acute Coronary Syndromes

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Abstracts 2390-2399

Changes in Post Discharge Outcome of Acute Myocardial Infarction in a Statewide Database

Y-Hoon Shin, UNMC/Ne Hoerr, Nebraska, Pascualsky, NJ; Allen E. Wilson, North Dakota; Douglass, William J. Kent, Joel C. Kent, John E. Kent. UNMC/Nebraska Heart Center, Omaha, NE; Nebraska Medicine, Omaha, NE; Research Foundation of the University of Nebraska, Omaha, NE

Background: During the last two decades, the in-hospital and long-term mortality of Acute Myocardial Infarction (AMI) has decreased consistently. However, the trend of in-hospital and long-term mortality after discharge, a significant component of the overall mortality, has not been studied extensively. This study aimed to determine if the post-discharge outcome of AMI patients has changed in the last 30 years.

Methods: The Nebraska Statewide Database (NSDW), a statewide hospital discharge database, was used to identify all AMI patients discharged from Nebraska hospitals between 1980 and 2010. The primary outcome of interest was all-cause mortality after discharge. The primary exposure of interest was the year of discharge. The study population was divided into five groups: 1980-1984, 1985-1989, 1990-1994, 1995-1999, and 2000-2010. The primary analysis was performed using logistic regression to estimate the odds ratio of death after discharge associated with each incremental increase of one year in the year of discharge.

Results: A total of 231,158 AMI patients were included in the study. The overall mortality rate after discharge was 18.5%. The odds ratio of death after discharge associated with each incremental increase of one year in the year of discharge was 0.89 (95% CI: 0.87-0.90, P<0.001). The mortality rate after discharge decreased significantly from 1980-1984 (28.7%) to 2000-2010 (12.8%, P<0.001). The decrease in mortality after discharge was similar across all age groups and among patients with and without comorbidities. The decrease in mortality after discharge was most pronounced among patients with comorbidities.

Conclusions: The results of this study suggest that the post-discharge outcome of AMI patients has improved significantly in the last 30 years. This improvement is likely due to improvements in medical care and public health initiatives.