**30-Day Readmissions After Primary Percutaneous Coronary Intervention in Nonagenarians: A Nationwide Analysis from the United States**

**Background**

There is limited data on 30-day readmission rates in nonagenarians (age >90 years) with ST elevation myocardial infarction (STEMI). We aimed to assess 30-day readmission rates and mortality at readmission in nonagenarians post-STEMI. The impact of primary percutaneous coronary intervention (pPCI) versus no pPCI on 30‐day readmissions and mortality at readmission was also examined.

**Methods**

We utilized the National Readmissions Database (NRD) from 2010 to 2018 to identify nonagenarians hospitalized with STEMI. We divided the total cohort into two groups based on pPCI status. We analyzed 30-day readmission rates, mortality at the time of readmission, and causes of readmissions in both cohorts.

**Results**

Between 2010–2018, an estimated 37,363 STEMI hospitalizations were identified in nonagenarians, of which 12,062 (32.3%) included pPCI and 25,301 (67.7%) had no pPCI. The overall 30-day readmission rate was 18.1% and was higher in pPCI cohort compared with no pPCI (22.1% vs 16.2%; p<0.01). However, the in-hospital mortality rates at 30-day readmission were significantly lower in pPCI cohort compared with no pPCI (7.0% vs 14.3%; p<0.01). Heart failure is the most common cause of 30-day readmissions in both cohorts, followed by acute myocardial infarction (MI) and gastrointestinal hemorrhage. Recurrent MI rates were significantly lower in pPCI cohort compared with no pPCI (12.3% vs 18.4%; p<0.01).

**Conclusion**

In nonagenarians with STEMI, pPCI during index hospitalization is associated with slightly higher 30-day readmissions but significantly lower mortality at the time of readmission. Given the remarkable mortality benefit with pPCI, further research is necessary to risk stratify and optimize readmission rates following STEMI in nonagenarians.

Graphical user interface, application

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