Effectiveness of cardiac rehabilitation among older patients after acute myocardial infarction

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Background

Guidelines recommend cardiac rehabilitation after acute myocardial infarction, yet little is known about the impact of cardiac rehabilitation on medication adherence and clinical outcomes among contemporary older adults. The optimal number of cardiac rehabilitation sessions is not clear.

Methods

We linked patients 65 years or older enrolled in the Acute Coronary Treatment Intervention Outcomes Network Registry-Get With the Guidelines (ACTION Registry-GWTG) from January 2007 to December 2010 to Medicare longitudinal claims data to obtain 1 year follow-up.

Results

A total of 11,862 patients participated in cardiac rehabilitation after acute myocardial infarction, attending a median number of 26 sessions. Patients attending ≥26 sessions were more likely to be male, had lesser prevalence of comorbid conditions and prior revascularization, and were more likely to present with ST-segment elevation myocardial infarction, compared with patients attending 1 to 25 sessions. Among patients with Medicare Part D prescription coverage, increasing number of cardiac rehabilitation sessions was associated with improvement in adherence to secondary prevention medications such as P2Y12 inhibitors and β-blockers. Each 5-session increase in participation was associated with lower mortality (adjusted hazard ratio [HR] 0.87, 95% CI 0.83-0.92) and lower overall risk of major adverse cardiac event (adjusted HR 0.69, 95% CI 0.65-0.73) and death/readmission (adjusted HR 0.79, 95% CI 0.76-0.83).

Conclusions

In this older patient population, number of cardiac rehabilitation sessions attended was associated with improved medication adherence and lower downstream cardiovascular risk in a dose-response relationship. This provides support for the continued use of cardiac rehabilitation for older adults and encourages efforts to maximize attendance.