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Underutilization of hospital-based cardiac rehabilitation after acute myocardial infarction in Korea

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Introduction

Cardiac rehabilitation (CR) after acute myocardial infarction (AMI) is recommended as a mandatory intervention in many national guidelines to reduce recurrence and mortality. However, underutilization of CR is a longstanding issue worldwide. In Korea, promotion of CR use is expected due to the coverage of CR by the national health insurance. However, the national status of CR use has not been reported, which is important in planning to increase CR utilization. We designed this retrospective cohort study to investigate the current status of CR use in AMI patients who underwent percutaneous coronary intervention (PCI) using nationwide data from the National Health Insurance Service (NHIS) of South Korea

Methods

AMI patients were defined as patients who were admitted with diagnosis of 'I21' code (from International Classification of Diseases, 11th Revision) and who received PCI from April 1st, 2017 to December 31th, 2017. CR use was defined as whether treatment (MM453) or evaluation (MM452) related to CR had been performed during outpatient follow-up period within 6 months after PCI. Claim data of NHIS from April 1st, 2017 to June 31th, 2018 was used. The rates of CR use according to by sex, age, region, insurance premium quartile, and hospital type were calculated and analyzed.

Results

About 3% of AMI patients (365/11,270) received CR during outpatient treatment after discharge. Men were more likely to receive CR (3.5%; 311/8,808) than women (2.1%; 54/2,462). By insurance premium quartile, the highest income group received CR (3.7%; 135/3,612) more than the lowest group (2.7%, 58/2,145). By type of hospitals, 73.5% of CR was delivered in tertiary hospitals. By region, there was a large variance of CR use rate from 0% to 26.4%.

Conclusion

Hospital-based CR after AMI is certainly underutilized despite its coverage by the national health insurance, compared to the CR use in other high-income countries. More cardiac rehabilitation facilities have to be installed according to the needs of CR in different regions. In hospitals which are providing with CR service, various strategies to increase the CR uptake and participation should be implemented. This is the initial report for nationwide CR use in AMI and further follow-up study is required.

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