Abstract: P628

Association of outpatient cardiac rehabilitation with mortality and morbidities in patients with acute myocardial infarction

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Background/Introduction:
Outpatient cardiac rehabilitation (CR) is commonly recommended for patients with acute myocardial infarction (AMI). However, the survival benefit has recently been contested, especially with no survival benefit having been found in non-Western countries.

Purpose:
To investigate whether outpatient CR, under current real-world clinical practice, is associated with lower mortality and morbidity risks in patients with AMI.

Methods:
The retrospective cohort study was conducted from January 2011 to June 2016 (final date of follow-up: July 31, 2016) with a nation-wide administrative database for acute-care hospitals in Japan. Data for 7,411 patients were analyzed, with 5,654 fulfilling the inclusion criteria of being admitted for AMI and receiving both percutaneous coronary intervention and inpatient CR between January 2011 and December 2014. We compared patients who participated in outpatient CR at least once within 180 days of discharge and who did not. To account for measured baseline imbalances between outpatient CR participants and non-participants, 1:1 propensity-score matching was performed. The primary outcome was a composite of all-cause death and recurrence of AMI after the landmark time-point of day 180 after discharge. Secondary outcomes included all-cause death, recurrence of AMI, and heart failure.

Results:
Among 5,654 patients (mean [SD] age, 66.8 [12.4] years; 21.2% female; median follow-up period [IQR] 1.44 [0.87 to 2.27] years), 730 (12.9%) received outpatient CR. Of 1,458 propensity-score matched patients, outpatient CR participants did not show a significantly lower risk of the primary outcome than non-participants (1.38 vs. 2.12 per 100 patient-years; hazard ratio [HR], 0.71 [95%CI, 0.32 to 1.61]). Similarly, outpatient CR participation was not associated with lower risks of all-cause death (0.68 vs. 1.31 per 100 patient-years; HR, 0.83 [95%CI, 0.25 to 2.73]), recurrence of AMI (0.69 vs. 0.88 per 100 patient-years; HR, 0.56 [95%CI, 0.19 to 1.66]) or heart failure (2.01 vs. 2.06 per 100 patient-years; HR, 0.89 [95%CI, 0.47 to 1.72]), respectively.

Conclusion:
Among patients with AMI who received percutaneous coronary intervention and inpatient CR, outpatient CR was not associated with lower risks of mortality and morbidities. The survival benefit of outpatient CR should be reaffirmed under current real-world clinical practice, especially in non-Western countries.