Stable Ischemic Heart Disease

DETERMINANTS OF THE VARIATION IN PRACTICE PATTERNS FOR REVASCULARIZATION VERSUS MEDICAL THERAPY IN STABLE ISCHEMIC HEART DISEASE: A POPULATION BASED STUDY

Poster Contributions
Hall C
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Background: There is substantial variation in the initial treatment strategy for patients with stable ischemic heart disease (SIHD). We sought to understand which patient-, physician- and hospital-level factors impact these variations in practice patterns.

Methods: All patients with an index angiogram for SIHD in Ontario, Canada, between October 1st, 2008 and September 30th, 2011, were categorized as either medical therapy or revascularized patients. Hospitals were classified into high, medium and low tertiles based on their revascularization to medical therapy ratios. The primary outcome was all-cause mortality, and patients were followed-up until December 31st, 2012. Hierarchical logistic regression models determined patient-, physician- and hospital-level predictors of revascularization, and multivariable Cox-proportional hazards models determined the impact of the revascularization ratio on outcomes.

Results: There was a 2-fold variation in the initial revascularization ratio, from 1.09 to 2.31. Patient-level differences accounted for 66.3% of the between-hospital variation in initial treatment strategy, while physician- and hospital-level factors did not substantially contribute to this between-hospital variation. Significant patient-level predictors of revascularization were male gender (Odds Ratio (OR) 1.060, 95% Confidence Interval (CI) 1.005-1.118, p=0.033), a history of smoking (OR 1.06, 95% CI 1.01-1.12, p=0.017), high risk findings on non-invasive stress testing (exercise ECG OR 1.28, 95% CI 1.19-1.37, p<0.001; functional imaging OR 1.08, 95% CI 1.01-1.15, p=0.020), and more severe anginal symptoms (Canadian Cardiovascular Class 4 OR 2.41, 95% CI 2.07-2.81, p<0.001). Patients treated at hospitals with a high revascularization ratio had higher mortality compared to patients treated at low revascularization ratio hospitals (Hazard ratio (HR) 1.09, 95% CI 1.01-1.17, p=0.023).

Conclusions: Patient-level differences were the major driver of between-hospital variation in initial treatment strategy. Patients at high revascularization ratio hospitals had worse outcomes, suggesting potential over-use of invasive therapies.