Abstract

BACKGROUND:

ISCHEMIA (International Study of Comparative Health Effectiveness With Medical and Invasive Approaches) did not find an overall reduction in cardiovascular events with an initial invasive versus conservative management strategy in chronic coronary disease; however, there were conservative strategy participants who underwent invasive coronary angiography early postrandomization (within 6 months). Identifying factors associated with angiography in conservative strategy participants will inform clinical decision-making in patients with chronic coronary disease.

METHODS:

Factors independently associated with angiography performed within 6 months of randomization were identified using Fine and Gray proportional subdistribution hazard models, including demographics, region of randomization, medical history, risk factor control, symptoms, ischemia severity, coronary anatomy based on protocol-mandated coronary computed tomography angiography, and medication use.

RESULTS:

Among 2591 conservative strategy participants, angiography within 6 months of randomization occurred in 8.7% (4.7% for a suspected primary end point event, 1.6% for persistent symptoms, and 2.6% due to protocol nonadherence) and was associated with the following baseline characteristics: enrollment in Europe versus Asia (hazard ratio [HR], 1.81 [95% CI, 1.14–2.86]), daily and weekly versus no angina (HR, 5.97 [95% CI, 2.78–12.86] and 2.63 [95% CI, 1.51–4.58], respectively), poor to fair versus good to excellent health status (HR, 2.02 [95% CI, 1.23–3.32]) assessed with Seattle Angina Questionnaire, and new/more frequent angina prerandomization (HR, 1.80 [95% CI, 1.34–2.40]). Baseline low-density lipoprotein cholesterol <70 mg/dL was associated with a lower risk of angiography (HR, 0.65 [95% CI, 0.46–0.91) but not baseline ischemia severity nor the presence of multivessel or proximal left anterior descending artery stenosis >70% on coronary computed tomography angiography.

CONCLUSIONS:

Among ISCHEMIA participants randomized to the conservative strategy, angiography within 6 months of randomization was performed in <10% of patients. It was associated with frequent or increasing baseline angina and poor quality of life but not with objective markers of disease severity. Well-controlled baseline low-density lipoprotein cholesterol was associated with a reduced likelihood of angiography. These findings point to the importance of a comprehensive assessment of symptoms and a review of guideline-directed medical therapy goals when deciding the initial treatment strategy for chronic coronary disease.

REGISTRATION:

URL: https://www.clinicaltrials.gov; Unique identifier: NCT01471522.

Graphical Abstract