Coronary Revascularization Guidelines Must Be Reconsidered to Account for Patients with Multivessel Disease, Surgeons Warn

Data analyses demonstrate that new downgraded recommendations for coronary artery bypass grafting—largely based on the ISCHEMIA trial—may result in undertreatment and complications for patients with multiple blockages

Today at the 59th Annual Meeting of The Society of Thoracic Surgeons in San Diego, experts cautioned that the 2021 Guideline for Coronary Artery Revascularization, released by the American College of Cardiology and American Heart Association, doesn’t consider the long-term risks for patients with blockages in three or more arteries.

“The 2021 guidelines were controversial, and they were largely controversial because of the downgrading of coronary artery bypass surgery (CABG) in patients with stable triple-vessel ischemic heart disease—from a class 1 recommendation, which is a very strong recommendation, to a 2B,” said Joseph F. Sabik III, MD, chair of the Department of Surgery at UH Cleveland Medical Center in Ohio. “To justify this, they used the ISCHEMIA study”—the multicenter trial published by Maron et al in 2020—“which in our opinion should not have been used.”

“ISCHEMIA wasn’t a study that was designed to look at CABG versus medical therapy in terms of survival,” Dr. Sabik explained. “It was really a study that was done to look at initial conservative strategy versus an initial invasive strategy. We wanted to examine how representative ISCHEMIA is for patients undergoing surgery, to see if the results are applicable.”

Examining the past two years of outcomes in the STS National Database™, Dr. Sabik’s team found that, based on the eligibility criteria for the ISCHEMIA trial, only about one-third of patients who underwent CABG would have been included in the study. “A third would have been excluded because they have left main disease, and the other third would have met other exclusion criteria,” said Dr. Sabik.

“The next thing we looked at was the demographics of the ISCHEMIA population versus our STS population. Patients included in ISCHEMIA, likely due to all the exclusion criteria, were at much lower risk. They didn’t have the same extent of comorbidities as our patients do, and they didn’t have the same extent of coronary artery disease.”

Patients in the STS cohort also had much more severe disease than most of the cohort in the ISCHEMIA trial, Dr. Sabik noted. “Patients who met the criteria to participate in ISCHEMIA tended to be younger, and they were less likely to have hypertension, diabetes, a previous stroke, peripheral vascular disease,
or renal dysfunction. In addition, ISCHEMIA patients were less likely to have had a myocardial infarction and more likely to have better left ventricular function.”

“Therefore, the ISCHEMIA study was not at all representative of patients who have coronary surgery today,” he said.

Though the authors of ISCHEMIA did their best to represent patients undergoing revascularization, the study wasn’t truly representative of patients with triple-vessel disease having surgery today—“and that’s why we don’t think it should have been used to downgrade coronary surgery recommendations in the guidelines.”

Dr. Sabik—as well as other surgeon advocates at STS 2023, including J. Hunter, Mehaffey, MD, who presented “Contemporary Coronary Artery Bypass Grafting versus Multivessel Percutaneous Coronary Intervention in 100,000 Matched Medicare Beneficiaries,” and Peter K. Smith, MD, who delivered the C. Walton Lillehei Lecture—urge that the guidelines be amended to align with current clinical practice.

“People are making treatment decisions based on these guidelines, and it may not be in the best interest of patients,” Dr. Sabik said.

“This is not about surgery. It’s not about PCI, it’s not about medical therapy. It’s about making sure that patients get the right treatment, so they can have the best long-term outcomes.”

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