EDITORIAL

The ISCHEMIA trial: nothing is complete unless put in final shape

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The treatment goal in stable coronary artery disease (CAD) is to reduce cardiovascular death and ischemic events and improve patients' quality of life. In patients with CAD, optimal medical therapy (OMT) with or without coronary revascularization is the mainstay for relieving symptoms, inhibiting the progression of atherosclerosis, and preventing atherothrombotic events.[1,2] Following the COURAGE (Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation) and BARI 2D (Bypass Angioplasty Revascularization Investigation 2 Diabetes) trials, ISCHEMIA (International Study of Comparative Health Effectiveness with Medical and Invasive Approaches) has further emphasized the importance of OMT, which consists of lifestyle modification, control of cardiovascular risk factors, and adherence to medications.[3-5] Although the result of the ISCHEMIA trial has again shocked interventional cardiologists, there were some pitfalls with regard to the evaluation of the efficacy of the invasive strategy.[6]

Pracoń et al[7] reported the level of OMT goal attainment in 333 Polish patients enrolled in the ISCHEMIA trial. Considering the importance of OMT, this study has great implications for reviewing current treatment strategies and suggesting future directions in CAD treatment. At baseline, one-third of the participants in this study had prior myocardial infarction, and more than half had a history of coronary revascularization which required OMT. However, the prescription of a high-intensity statin and control of low-density lipoprotein cholesterol levels at less than 70 mg/dl in these participants were very low, at 27% and 29%, respectively, indicating that lipid-lowering management was suboptimized in several cases. In addition, blood pressure (systolic blood pressure <140 mm Hg or diastolic blood pressure <90 mm Hg) was not adequately controlled. These findings suggest that OMT is not well achieved in the real-world practice and that more attention and efforts are needed for OMT goal attainment. After an average follow-up of 3.2 years (3.84 years for Polish participants), the proportions of achieved OMT goals increased. In particular, the use of high-intensity statins (27% vs 50%) and control rates of low-density lipoprotein cholesterol levels at less than 70 mg/dl (29% vs 65%) and systolic blood pressure at less than 140 mm Hg (63% vs 81%) dramatically improved in Poland.

However, the results of this study cannot be interpreted as an improvement in the overall OMT goal attainment in the real-world practice. Most randomized controlled trials were performed with strict and regular surveillance for medications and follow-up compared with real-world practice. In the ISCHEMIA trial, regular surveillance, including blood tests; medical therapy optimization; and assessment of medication adherence, lifestyle, and quality of life were performed and updated during the follow-up period according to the protocol.

A multidisciplinary-healthcare-team approach is required for OMT goal attainment. First, the importance of OMT for the broader clinical community, including not only cardiologists but also all physicians and other healthcare providers, should be emphasized, and patients with CAD should receive OMT regardless of their revascularization strategy. Based on the baseline characteristics reported in this study, lipid-lowering management, blood pressure management, and antianginal management after revascularization are relatively easy to overlook, and some of these misunderstandings on part of the physicians or patients should be corrected.

Moreover, developing public healthcare policies to improve and maintain OMT for patients with CAD should also be considered. The GWTG-CAD (Get With the Guidelines–Coronary Artery Disease) program, which is a hospital- and community-based program, is a good example showing how policy has helped improve OMT prescription and patient compliance.[8] Hospitals

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participating in the GWTD-CAD, which were regularly assessed for OMT, had higher rates of OMT goal attainment than those that did not, and the observed differences would persist over time.

Finally, the therapeutic effect and adherence to medications should be regularly evaluated, as demonstrated in the ISCHEMIA trial. In a study by Farkouh et al,[9] only 18% of patients in the COURAGE trial and 23% of those in the BARI 2D trial achieved the goals for controlling blood pressure, cholesterol, and diabetes and smoking cessation. Although the CLARIFY registry showed a high rate of β-blocker use in patients with CAD, the dose was insufficient in approximately 40% of patients.[10] Therefore, medical therapy should be optimized by periodically assessing the heart rate, blood pressure, and lipid profile. In addition, the importance of OMT should be explained to patients at each clinical encounter to improve compliance, and several factors such as dosing frequency, polypill strategy, insurance coverage of prescribed drugs, and patient education and follow-up, which may affect patient compliance, should be considered.[11] In a meta-analysis on patients with CAD, good adherence to recommended OMT reduced the risk of all-cause mortality, cardiovascular mortality and hospitalization, and myocardial infarction by approximately 40% compared with poor adherence.[12] Along with OMT, patients with CAD should be encouraged to adopt lifestyle modifications, including smoking cessation, regular physical activity, and healthy eating with body weight management to achieve the best results.

"Nothing is complete unless you put it in final shape" is a proverb that emphasizes the importance of practice. To obtain good outcomes such as those reported in the ISCHEMIA trial in patients with CAD, it is necessary to assess possible explanations regarding the high goal attainment in the Polish healthcare system.

ARTICLE INFORMATION

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