Letter by Picard and Ly Regarding Article, “Frequency and Predictors of Internal Mammary Artery Graft Failure and Subsequent Clinical Outcomes: Insights From the Project of Ex-Vivo Vein Graft Engineering via Transfection (PREVENT) IV Trial”

To the Editor:

In the largest series to date, Harskamp et al provide readers with a comprehensive analysis of the predictors of midterm (12–18 months) internal mammary artery (IMA) graft failure in the setting of the Project of Ex-Vivo Vein Graft Engineering via Transfection (PREVENT) IV trial. The authors are to be congratulated for this important contribution to our body of knowledge. However, we would like to comment on 2 issues that remain unaddressed despite their conclusions.

First, as with most revascularization trials and from the 1-year proportions of various cardiac medications taken by the PREVENT IV patients, it is unclear whether overall medical (not just statin) therapy was adequately optimized. A 12- to 18-month follow-up of outcomes likely excludes purely technical mishaps as a mechanism for IMA graft failure. Previous interventional trials have established that clinical outcomes are improved when optimal medical therapy is stringently applied. Moreover, recent data even support an enrollment volume effect on cardiovascular outcomes when medical management is aggressively applied after invasive treatment.

Second, albeit recognized by the authors, the grading of graft and target vessel quality used by surgeons at the time of surgery combined with a purely anatomic (angiographic) assessment of the left anterior descending artery (LAD) was not ideal. Although this article focuses on LAD angiographic lesion severity, the contribution of left main disease remains unclear. One cannot gather from looking at the angiographic details in Table 1 whether a moderate or severe left main lesion was associated with a mild to moderate LAD lesion. We agree with the authors that fractional flow reserve (FFR) could be the better tool to guide revascularization compared with intravascular ultrasound assessment. The latter could potentially lead to increased rates of revascularization of intermediate lesions without a significant clinical benefit relative to FFR assessment.

Furthermore, in the evaluation of the left main–LAD lesion subgroup by FFR, serial coronary lesions and their contribution (both individual and additive) to the physiological burden on coronary reserve must be taken into account. Clinicians and interventionalists should be aware of key tenants of using FFR under such circumstances. Thus, when used appropriately, FFR assessment could both help predict graft patency and, more important to the benefit of patients, contribute to reclassification of invasive treatment strategy. This could then avoid “sacrificing” an IMA graft, which is clearly associated with survival benefit. Therefore, we wonder whether the authors looked at intermediate LAD artery lesion alone lesions or whether their analysis adjusted for combinations of levels of severity of the left main and LAD lesions as predictors of IMA graft failure.

Disclosures

None.

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References


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