Perspectives on patients with diabetes mellitus and triple-vessel disease undergoing coronary artery bypass grafting after previous percutaneous coronary intervention

To the Editor:

In their recent article, Thielmann and colleagues1 concluded that previous percutaneous coronary intervention (PCI) in patients with diabetes and triple-vessel disease is an independent predictor of death and major adverse cardiac events for patients undergoing coronary artery bypass grafting (CABG). We wish to point out a few confounders and issues that we believe readers should take into consideration when interpreting this study. First, as acknowledged by the authors, the statistical analysis was based on pooled registry data, obtained in a nonrandomized manner and analyzed retrospectively. In addition, the preoperative characteristics differed significantly between groups in important prognostic markers of adverse outcome after CABG, including renal dysfunction and previous myocardial infarction.2 Interestingly, the same univariate analysis that identified previous PCI as a predictor of adverse outcome after CABG did not do the same for renal impairment. If the authors conclude the former, are they then implying that previous PCI is a more potent predictor of adverse outcome than the well-recognized problem of renal impairment?

In addition, patients who underwent CABG after PCI constituted a cohort who had already been failed by PCI in combination with optimal medical therapy as a result of either restenosis or progression of de novo disease. This suggests that these patients were in effect a cohort with aggressive coronary disease, and that they might have had poorer outcomes no matter what strategy was offered first. It is therefore difficult to compare this cohort with a group of patients with coronary artery disease without previous treatment failure who were offered CABG as a first revascularization strategy.

Although it may be true that patients with a history of previous PCI may have a higher risk of perioperative complications, it is important to keep in perspective the limitations of this study. We do, however, agree with the authors that current evidence supports revascularization with CABG rather than PCI in the diabetic population. Despite this advice, many patients still opt for less-invasive strategies such as PCI in the first instance. Certainly, the widespread availability of drug-eluting stents has led to interventional cardiologists tackling more difficult, previously unfavorable lesions, not amenable to surgery. Therefore in an evolving area, it is not unexpected that surgeons will be confronted with more challenging patient cohorts.

Ravinay Bhindi, MBBS, PhD, FRACP, FESC
William Van Gaal, MBBS, FRACP
Luca Testa, MD
Department of Cardiology
John Radcliffe Hospital
Oxford, UK

References

Meta-analysis of randomized controlled trials of cognitive decline after on-pump versus off-pump coronary artery bypass graft surgery

To the Editor:

We read with interest the meta-analysis of randomized studies of neurocognitive decline after on-pump versus off-pump