

LETTER TO THE EDITOR

Quality of life after fractional flow reserve-guided percutaneous coronary interventions compared with coronary bypass surgery

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The FAME 3 trial (Fractional Flow Reserve versus Angiography for Multivessel Evaluation) found that FFR guided PCI using current generation zotarolimus DES did not meet the criterion set for noninferiority about major adverse cardiac and cerebrovascular events at 1 year compared with CABG [1]. In another publication, the same authors analyzed the quality of life of these patients at 12 months using three variables: quality of life, measured by European Quality of Life-5 Dimensions (EQ-5D), grade of angina by the Canadian Cardiovascular Class (CCS) and work status, this was assessed at baseline, one, six, and 12 months, with patients classified as working (full-time or part-time) or not working (due to retirement, health restriction or other reasons), with a pre-specified subgroup comparison for patients of working age, i.e., <65 years old at baseline [2]. Their conclusion was in patients with 3V-CAD, quality of life and angina severity at 12 months are similar after FFR-guided PCI with current generation DES compared with CABG. FFR-guided PCI results in a faster improvement in quality of life than CABG during the first year after revascularization as was working status in those < 65 years-old.

As they themselves comment in their final analysis, the main limitation of this study is that the 12-month follow-up is relatively short. The clinical outcomes of CABG compared with PCI may change during longer follow-up periods, including quality of life and angina as well as the “harder outcomes” such as death and MI.

It is obvious that the quality of life immediate to the procedure is better in the PCI group, however there are many reports that in the long term, even in similar periods of time, the CABG showed better quality of life. Especially since it has

a lower incidence of reoperations or catheterizations for recurrent angina.

Since the 90s there are similar reports such as that of Rodríguez et al. [3]. This study was designed to compare freedom from combined cardiac events (death, angina, myocardial infarction) at 1, 3 and 5-year follow-up in patients with multivessel disease randomized to either percutaneous transluminal coronary angioplasty or coronary artery bypass graft surgery; their conclusion was similar. At 1-year follow-up there were no differences in survival and freedom from myocardial infarction, patients in the coronary artery bypass grafting group were more frequently free from angina, reinterventions and combined events than were patients in the coronary angioplasty group.

Cohen et al. [4], in a randomized trial, they assigned 1800 patients with three-vessel or left main coronary artery disease to undergo either CABG (897 patients) or PCI with paclitaxel eluting stents (903 patients). Health-related quality of life was assessed at baseline and at 1, 6, and 12 months with the use of the Seattle Angina Questionnaire (SAQ) and the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36). The primary end point was the score on the angina-frequency subscale of the SAQ (on which scores range from 0 to 100, with higher scores indicating better health status). The conclusion was: Among patients with three-vessel or left main coronary artery disease, there was greater relief from angina after CABG than after PCI at 6 and 12 months, although the extent of the benefit was small.

On 2011, Weintraub et al. [5] performed a review of comparative effectiveness of revascularization strategies; they linked the ACCF National Cardiovascular Data Registry and the STS Adult Cardiac Surgery Database to claims data from the Centers for Medicare and Medicaid services for the years 2004 through 2008, the among patients 65 years of age or

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older who had two-vessel or three-vessel coronary artery disease without acute myocardial infarction, 86,244 underwent CABG and 103,549 underwent PCI. The median follow-up period was 2.67 years. In this observational study, they found that, among older patients with multivessel coronary disease that did not require emergency treatment, there was a long-term survival advantage among patients who underwent CABG as compared with patients who underwent PCI.

Therefore, the analysis of quality of life showed on The FAME 3 trial, even with the use of new technology (Fractional flow reserve) is similar to previous studies. Interestingly,

the reports do not have continuity for more than 5-10 years comparing PCI vs CABG. I hope that this last study has continuity to be even clearer that in the long term in multivessel disease, CABG has better quality of life, freedom from angina and adequate work status.

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