

## Letter to the Editor

## What Is the Place of Percutaneous Coronary Intervention in the Management of Stable Angina?

CARLOS ESCOBAR<sup>1</sup>, VIVENCIO BARRIOS<sup>2</sup>

<sup>1</sup>Department of Cardiology Hospital Infanta Sofía, San Sebastián de los Reyes, <sup>2</sup>Department of Cardiology, Hospital Ramón y Cajal, Madrid, Spain

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Address:  
Carlos Escobar

Department of  
Cardiology,  
Hospital Infanta Sofía  
Paseo de Europa 34  
287 02 San Sebastián  
de los Reyes  
Madrid, Spain  
e-mail: [escobar\\_cervantes\\_carlos@hotmail.com](mailto:escobar_cervantes_carlos@hotmail.com)

**A**lthough the benefits of percutaneous coronary intervention (PCI) are unquestionable in acute coronary syndromes, the clinical results are not so clear in stable angina. Thus, the COURAGE trial reported that, among patients with stable angina, as an initial management strategy PCI did not reduce the risk of death, myocardial infarction, or other major cardiovascular events when added to optimal medical therapy.<sup>1</sup> In fact, a recent meta-analysis that included a total of 7229 patients reported that initial stent implantation for stable coronary artery disease showed no evidence of benefit compared with initial medical therapy for prevention of death, nonfatal myocardial infarction, unplanned revascularization, or angina.<sup>2</sup>

Among outpatients with coronary artery disease, self-reported anginal symptoms consistently predict mortality, irrespective of differences in age, race, education, or clinical comorbidities.<sup>3</sup> A significant reduction in coronary heart disease mortality rates in some countries has been detected in the last years. Thus, in Ontario, the coronary heart disease mortality rate decreased by 35% between 1994 and 2005; this was associated primarily with positive trends in risk factor control and improvements in medical

treatments, each explaining about half of the decrease.<sup>4</sup>

In the light of these data, the two main goals in the management of patients with stable angina should be to avoid anginal symptoms, or at least to reduce them, and to attain cardiovascular risk factor targets. However, as shown in a large contemporary United States cohort, although for acute indications 98.6% of performed PCIs were classified as appropriate, only 50.4% of PCIs were classified as appropriate for non-acute indications.<sup>5</sup> Moreover, the majority of inappropriate PCIs for non-acute indications were performed in patients with no angina (53.8%), low-risk ischemia on noninvasive stress testing (71.6%), or suboptimal ( $\leq 1$  medication) anti-anginal therapy (95.8%). What is more, it has been reported that in very high risk patients, such as those with renal impairment, for whom the benefits of revascularization are greater, coronary angiography is performed less than in those with normal renal function.<sup>6</sup> These results emphasize that, in contrast to acute coronary syndromes, the indications for PCI in patients with stable angina are less clear.

Taking into account that in the last years new anti-anginal drugs, such as ivabradine or ranolazine, have emerged, new guidelines should clarify the indica-

tions of PCI for patients with stable angina. Meanwhile, it is likely that, in stable patients, PCI should be reserved to those with persisting angina despite optimal medical therapy including several drugs at adequate doses (beta blockers, calcium channel blockers, ivabradine, nitrates, ranolazine,...) and in those patients with high-risk ischemia on noninvasive stress testing.<sup>7,8</sup>

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