**ARGENTINE COLLEGE OF CARDIOVASCULAR SURGEONS**

The recent publication of the 2021 ACC/AHA Guidelines for Coronary Artery Revascularization (1) has attracted wide interest and a call to attention on the surgical community due to the controversies and setbacks expressed which do not seem reflect the best treatments options for patients with stable coronary ischemia.

The Argentine College of Cardiovascular Surgeons, as well as other international scientific societies of cardiac surgery (2-4), introduces their position by means of their Cardiac Surgery Committee.

The new guidelines express a change in recommendation from 1 to 2b on coronary artery bypass grafting (CABG) over medical therapy alone to improve survival in patients with 3-vessel CAD with preserved left ventricular (LV) function and no left main (LM). On the other hand, the same degree of recommendation is given to percutaneous coronary intervention (PCI), although it is clarified that "the usefulness of PCI to improve survival is uncertain" (Chapter 7.1 related to revascularization on survival in patients with stable ischemic heart disease (SIHD).

This change in recommendation is based on the author `s interpretation of the results of the ISCHEMIA study (5) which was not designed to compare results between surgery and optimized medical treatment (OMT). In this study, patients were randomized to an invasive or conservative-strategy groups. No evidence that an initial invasive strategy, as compared with an initial conservative strategy, reduce the risk of ischemic cardiovascular events or death from any cause over a median of 3.2 years was found (5). However, it did show that an invasive strategy would seem to reduce the risk of infarctions and improve quality of life, although there were no difference between the groups

with respect to mortality. Only 26% of patients with an initial invasive strategy who received revascularization were treated with surgery. Considering that 42% of patients had diabetes and 71% multi vessel disease, it is likely that CABG has been underestimated, leaving the choice between PCI and CABG to local working groups.

The new guidelines show no additional randomized controlled trial (RCT) to support this downgrade in the level of evidence. It is just enough to review the literature to verify that the only treatment that has had an impact on survival and the incidence of myocardial infarction is surgery. From the meta-analysis published by Yusuf et al in the Lancet in 1994 until now, all observational and randomized studies have shown a significant decrease in mortality from 5 to 10 years in patients undergoing surgery, even more among the highest risk patient subgroups (6).

Although recent studies have shown an enormous improvement on medical therapy (6), a better management should include not only the use of cardio protective drugs but also risk factors controls which may decrease the prevalence of refractory angina and the need for subsequent revascularization. This is reflected on the BARI-2D, COURAGE and FREEDOM studies where the percentage of patients who reached a complete medical treatment (tobacco cessation glycohemoglobin, LDL, systolic blood pressure control) were only 23, 18 and 8% respectively (7-8-9).

On the other hand, to assume that the revascularization strategy between PCI and CABG is similar or equivalent is wrong. Numerous studies such as Syntax, Excel, Noble, (10-11-12) have already demonstrated the superiority of CABG in reducing revascularization and peri-procedural infarction compared to PCI.

According to different randomized studies comparing PCI vs CABG, the benefits of myocardial revascularization are more evident after three years when the mortality, infarction and need for revascularization curves begin to diverge in favor of the surgery.

It is remarkable that the new guidelines do not take into account this previously published evidence demonstrating that total arterial revascularization offers excellent survival benefits, reduction in the incidence of MI and recurrence of symptoms at long-term follow-up (13-14).

Another controversial recommendation of the recent 2021 guidelines committee is the use of radial artery over the use of vein grafts for revascularization. The radial artery has shown greater benefits on patency, fewer adverse cardiac events and higher survival rate. However, the authors equal this graft to the IMA (I) and even over the BIMA graft (2a). Since this recommendation is supported in only small studies, it would seem not to have sufficiently substantiated (15). Furthermore, radial approach for percutaneous procedures has become an indication IA which means another and relevant reason to embolden different subspecialties cardiologists, cardiovascular surgeons and interventional cardiologists) at the time of writing guidelines.

The Argentine College of Cardiovascular Surgeons values the effort and work done by the ACC / AHA committee in preparing these guidelines. But following the precepts of the "Heart Team" and interdisciplinary joint work with the aim to obtain better outcomes, we consider that the inclusion, approval and endorsement of this type of recommendations including others international surgical scientific societies such as STS, AATS, EACTS, LACES is necessary to obtain a better understanding and agreement on the current evidence.

Finally, although it is true that the publication of guidelines is of big relevance on our decision making, we must take into account their applicability on the Real World considering the needs and problems of the own environment to allow a better management of our patients (16).

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