# *Atrium*

This issue opens with an article by Fernando A. Navarro, who describes anecdotic observations on the various color "codes" used in the North-American health system to refer to distinct situations.

In the first of the editorials, Parikh and Kirtane discuss a study by Im et al., a curious and interesting clinical trial randomizing clinically stable patients on aspirin monotherapy 12 months after drug eluting stent implantation to receive high-intensity (atorvastatin 40 mg, n = 1000 ) or low-intensity (pravastatina 20 mg, n = 1000) statin therapy. The primary endpoint was adverse clinical events at 12-months (a composite of death, myocardial infarction, revascularization, stent thrombosis, stroke, renal deterioration, intervention for peripheral artery disease, or admission for cardiac events). The primary endpoint occurred in 25 patients (2.5%) receiving high-intensity therapy and in 40 (4.1%) receiving low-intensity therapy (HR = 0.58; 95% CI, 0.36-0.92; *P* = .018). The authors of the editorial mention two controversial aspects of the study. The first concerns the appropriateness of performing a clinical trial in this population given that, according to most recommendations, these patients should systematically receive high-intensity statin therapy. Im et al. justify their study on the basis that, in real-world clinical practice, only a very small percentage of patients with these characteristics receives high-intensity statin therapy. The second concerns the use of a composite endpoint consisting of multiple and heterogeneous components, which could complicate interpretation of the results.

In the second editorial, Lefevre and Louvard discuss an article by Ojeda et al., analyzing the immediate and mid-term outcomes in patients with bifurcation lesions in the context of a coronary chronic total occlusion treated with a provisional stenting vs a 2-stent technique. This registry was conducted by 4 centers and included 922 chronic total occlusions. Rates of angiographic and procedural success were similar in the 1- and 2-stent groups (94.5% vs 97.3%; *P* = .48 and 85.6% vs 81.1%; *P* = .49). However, contrast volume, radiation dose, and fluoroscopy time were lower with the simple approach. There were no differences in clinical events. The authors of the editorial mention that, although the results should be interpreted with caution in the context of a nonrandomized study, the findings are in line with those of previous publications and, moreover, the study will undoubtedly help to shed light on the principles of the treatment of these lesions. Both the original article and the editorial are published as open-access articles and are accompanied by an "Editor's pick" video.

In the last editorial in this issue, Fracassi and Niccoli discuss an experimental study by Ríos-Navarro et al., analyzing coronary angiogenesis induced by coronary serum and the role of hypoxia-inducible factor-1A (HIF)-1A in microvascular obstruction repair after an acute myocardial infarction. The authors induced myocardial infarction in swine through transitory coronary occlusion and analyzed the proangiogenic effect of coronary serum using an in vitro tubulogenesis assay in a control group and in 4 groups with myocardial infarction and distinct reperfusion times. Microvessel density decreased in the infarct zone after 90 minutes of ischemia, which resolved after 1 month of reperfusion. The proangiogenic effect of coronary serum increased during ischemia and 1 minute after reperfusion, as did circulating HIF-1A levels during ischemia. Fracassi and Niccoli provide a detailed and pertinent review of the most widely studied proangiogenic factors in myocardial infarction and attempt to find reasons for the discrepancies in results between preclinical studies in this context, undoubtedly a challenge in translational cardiology.

In the next original article, Salvador-González et al. analyze the association between estimated glomerular filtration rate, cardiovascular events, and all-cause mortality in persons aged 60 to 74 years and 75 years or more. This was a retrospective study using primary care and hospital electronic records, conducted in a region with a low incidence of coronary disease. A total of 130 000 individuals were included and classified according to their estimated glomerular filtration rate. A higher adjusted risk was observed in persons aged ≥ 75 years, which was significant at an estimated glomerular filtration rate < 60. However, small decreases in this rate did not represent an additional cardiovascular risk in this population at low coronary risk.

Also on the topic of cardiovascular risk factors, Elosua-Bayés et al. performed a cross-sectional study in 2613 individuals in the province of Girona to describe the distribution of the cardio-ankle vascular index in a Mediterranean population. This index is a noninvasive indirect test of arterial stiffness. The authors hypothesize that a cardio-ankle vascular index > 9 could be useful to improve risk stratification in the Mediterranean population, which has traditionally been described as having a strikingly low risk of cardiovascular events considering the prevalence of classic risk factors. The prevalence of cardio-ankle vascular index > 9 was 46.8% in men and 36% in women and was associated with higher coronary risk. Specifically, it was associated with hypertension, diabetes, high body mass index, and low physical activity in men, and with hypertension, hypercholesterolemia, and high body mass index in women.

In the last original article in this issue, Pessoa Amorim et al. aimed to test the hypothesis that left atrial strain in aortic stenosis may precede atrial enlargement and predict the occurrence of atrial fibrillation. A total of 149 patients with severe aortic stenosis and no prior atrial fibrillation were evaluated using speckle-tracking echocardiography. Left atrial function was assessed using peak atrial longitudinal strain and peak atrial contraction strain. The onset of atrial fibrillation was monitored from surgery until hospital discharge. Atrial dysfunction evaluated with both parameters was associated with a higher risk of postoperative atrial fibrillation independently of atrial dilation, which could help in risk stratification, particularly in patients with nondilated left atria.

This issue also includes a review of cardiac resynchronization therapy by Auricchio and Heggermont. Although this is an established treatment for heart failure with reduced left ventricular ejection fraction and wide QRS complex, there continues to be a significant number of nonresponders. This review discusses some recent technological advances that have helped to increase the number of responders, such as novel lead design and more sophisticated CRT delivery. Some of these innovations may also reduce the burden of atrial fibrillation and the number of inappropriate interventions and help to predict heart failure episodes.

This issue also includes two book reviews, *Adult Congenital Heart Disease* and *Nuclear Cardiology*, which we hope will be useful. As always, don't forget to take a look at the excellent images in this issue or read the letters. We also encourage you to take part in our monthly ECG contest.

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