Atrium

CALIFA, DINO, ENRICA, and ESTROFA, etc, are acronyms familiar to all of us as they designate clinical research directed in Spain. In this issue, Fernando A. Navarro offers us his view of clinical research acronyms, from the perspective of a medical language scholar.

In the first of the editorials in this issue, Khalid et al. discuss an original article by Raposeiras-Roubín et al. aiming to determine the effect of renin-angiotensin system blockade on the prognosis of acute coronary syndrome based on left ventricular ejection fraction. The authors analyzed data from the international BleeMACS registry. Of 15 401 patients with acute coronary syndrome undergoing percutaneous coronary intervention, ACEI/ARB were prescribed in 75.2%. After multivariable adjustment, ACEI/ARB were associated with lower mortality, but only among patients with LVEF $\leq$ 40%. In patients with LVEF $>$ 40%, ACEI/ARBS were associated with lower mortality only in ST-segment elevation myocardial infarction. Khalid et al. place the results of the study in context, highlighting that, despite the sophisticated and meticulous statistical analysis, the study's observational design makes it susceptible to residual bias, especially confounding by indication, and consequently caution is required when interpreting the results. In this regard, the authors of the editorial recommend following guideline recommendations on the indications for ACEI/ARB in coronary syndrome, despite a certain lack of external validity, because they are based on clinical trials conducted before the massive use of percutaneous revascularization.

In the next editorial, van der Zwaan et al. discuss an original article by Galian-Gay et al. aiming to assess the long-term outcomes of repaired pulmonary valve stenosis and to identify predictors of cardiovascular complications and reintervention. The authors analyzed data from a tertiary referral center with 158 patients with pulmonary valve stenosis. Of these, 95 patients underwent surgical treatment and 63 underwent percutaneous pulmonary balloon valvuloplasty. After a mean follow-up of 27 years, most of the patients were in functional class I, although 61 patients (38.6%) required reintervention, mainly pulmonary valve replacement. Independent predictors of complications during follow-up were age at repair and the presence of cyanosis before repair. The authors of the editorial highlight the exhaustive nature of the registry, which includes only patients with isolated pulmonary vein stenosis and not those with other entities, such as tetralogy of Fallot, thus providing added value. They also mention the limitations acknowledged by the authors of the study, such as the loss of up to 25% of the patients during the long-term follow. However, this loss is not particularly surprising in these types of study, given the context of the population they include.

Paravalvular leaks are defined as an anomalous channel between the structure of the prosthetic valve and the surrounding natural heart tissue. Although not usually clinically relevant, between 2% and 5% of these leaks cause congestive heart failure, hemolytic anemia, or both. Treatment is usually surgical but has a higher risk of morbidity and mortality than the original intervention, especially in procedures involving the mitral valve, a situation that has encouraged the development of percutaneous techniques. In the last editorial in this issue, published as an open-access article, Millán et al. discuss the present and future of percutaneous techniques for the treatment of paravalvular leaks in terms of surgical procedures.

In the next original article in this issue, Martínez-Losas et al. analyze neuron-specific enolase kinetics as a biomarker for neurological prognostication in survivors of a cardiac arrest treated with targeted temperature management. The authors performed a retrospective analysis of 320 patients admitted to a tertiary care center after resuscitation from in- or out-of-hospital cardiac arrest and cooled to 32 °C to 34 °C for 24 hours. A total of 174 (54.4%) survived with good neurological outcome. Unsurprisingly, patients with poor neurological outcome had higher neuron-specific enolase values on admission and at 24, 48, and 72 hours after restoration of rhythm. An important predictor of poor neurological outcome was the change in enolase values during the time interval considered. The study is published as an open access article and is accompanied by an Editor's pick video.

Although the electrocardiogram has been proposed as a screening test for heart disease in asymptomatic young people, its systematic use is controversial. In the next original article, Vilardell et al. aimed to determine the prevalence and types of electrocardiogram findings in a population of 1911 secondary school students. Of the total, 1321 had normal findings, 554 showed findings suggestive of adaptive changes, the 36 had pathologic findings. Among the latter group, cardiovascular disease was diagnosed in 5 (14%). The prevalence of heart disease in this asymptomatic group was 0.3%. As stated by the authors, deciding whether an electrocardiogram finding is pathological or whether it indicates adaptive changes continues to be a challenge, and correct classification has major repercussions for the approach to be adopted.

Physical fitness or cardiorespiratory functional capacity and physical activity are inversely and independently related to all-cause and cardiovascular mortality. The most objective method of measuring physical fitness is by determining maximal oxygen consumption through expired gas analysis. However, this method is complex. In the next original article in this issue, Tojal et al. analyze whether variations in physical activity and sedentary behaviors are accompanied by differences in maximal oxygen consumption, and correlated maximal oxygen consumption with the REGICOR and RAPA 1 self-reported questionnaires on physical activity. This prospective, cross-sectional study was conducted in 243 volunteers (82 women), with metabolic syndrome and overweight/obesity who performed a maximal exercise test with expired gas analysis. Briefly, maximal oxygen consumption was higher in patients who reported meeting the recommendations of physical activity guidelines and in those reporting more physical activity than in less active patients. However, perhaps the most important finding of this study was that the REGICOR and RAPA 1 physical activity questionnaires identified significant differences in maximal oxygen consumption between more active and less active participants. As pertinently mentioned by the authors, these findings are of interest, given the complexity of direct measurement of maximal oxygen consumption.

The helical structure of the ventricular myocardium gives a simple view of cardiac anatomy and helps explain the electromechanical contraction of the myocardium during the cardiac cycle. The last original article in this issue is somewhat unusual, as it is more important to view it than to read it. Antúnez Montes aims to descriptively standardize the technique for preparing and dissecting the myocardium empirically proposed by Torrent Guasp,

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through manual dissection, to anatomically and topographically correlate the helical band with echocardiographic long-axis, short-axis, and 4-chamber projections in 42 hearts, 2 of them human. The study contains fascinating images allowing perfect identification of the 4 myocardial segments of standard echocardiographic projections.

Current control of low-density lipoprotein cholesterol in patients with atherosclerotic cardiovascular disease is extremely poor, which is associated with an increased risk of cardiovascular complications. This issue of the journal contains a document endorsed by the Spanish Society of Cardiology that proposes 3 algorithms encompassing most of the clinical situations encountered in patients with ischemic heart disease. The aim is to meet targets in the majority of patients in as short a time as possible, since the benefit in secondary prevention is risk- and time-dependent.

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 ECG Contest.

Ignacio Ferreira-González
Editor-in-chief