Cardiopulmonary exercise testing in patients with severe aortic stenosis: lights and shadows. Response

Prueba de esfuerzo con consumo de oxígeno en pacientes con estenosis aórtica grave: luces y sombras. Respuesta

To the Editor,

We appreciate the critical analysis regarding our study provided by Lacalzada-Almeida et al., in which they highlight their experience in the use of cardiopulmonary exercise testing (CPET) in patients with aortic stenosis (AS).

In their study, Lacalzada-Almeida et al.[1] found a higher percentage of abnormal CPET results—defined by symptoms and electrocardiographic and blood pressure changes—in patients with severe or paradoxical low-gradient AS than in patients with moderately severe AS. No differences were found in the peak oxygen consumption (pVO_2) or the VE/VCO_2 slope between these 3 groups. This may be explained by the limited population included and possible selection bias, as the authors point out, by excluding patients with inconclusive symptoms attributable to AS. In addition, a nonnegligible percentage of patients reached an RER < 1.1, which could lead to erroneous analyses if submaximal CPET parameters were not taken into account.[1]

Currently, CPET is the only objective tool available to estimate myocardial oxygen consumption, ventilatory efficacy, and muscle performance on exertion, information of value to determine the cause of a patient's symptoms.[2] Hence, we propose CPET use in patients with asymptomatic severe AS, as many of them are falsely asymptomatic because of several concurrent factors, such as advanced age, frailty, obesity, and others.[2] pVO_2 values < 20 mL/kg/min and VE/VCO_2 slope values > 30 are pathological and imply a higher risk of adverse events on follow-up, as described by Guazzi et al.[3] in the first published report proposing an algorithm for the study of valve disease with CPET.

Thus, our group proposes an objective algorithm to identify these falsely asymptomatic patients using CPET. In the absence of randomized studies, we believe it could be a useful instrument for this purpose.

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All authors have contributed to writing and critical review of the article.

CONFLICTS OF INTEREST

P. Avanzas is an associate editor of *Revista Española de Cardiología*; the editorial procedure established by the journal has been followed to guarantee impartial management of the manuscript. The other authors declare that they have no conflicts of interest.

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Variability and equity, a debatable relationship

Variabilidad y equidad, una relación discutible

To the Editor,

In a recent study published in *Revista Española de Cardiología*, de la Torre Hernández et al.[1] conclude that cardiovascular technology use varied considerably across Spain's autonomous communities and that the variability observed could not be explained by economic factors or number of hospital visits. The authors made several references to «equal opportunities» and even mentioned «country-wide deficiencies in equitable access to cardiovascular interventions of proven clinical effectiveness». Based on the study's findings, we believe it may be somewhat rash to draw an inverse correlation between variability in technology use and equitable access to health care interventions. The authors acknowledge certain limitations of their study,[1] and these are neatly illustrated in an editorial on the subject.[2] Age is one of many factors not assessed in the study that can influence the use of cardiovascular procedures. An autonomous community with an older population, for example, may perform more procedures. Using a simple analysis of data from 2019, we observed a direct regional correlation between mean population age and the number of