

Gender and ST-elevation myocardial infarction. Response



Sexo e infarto agudo de miocardio con elevación del ST. Respuesta

To the Editor,

We read with interest the letter “Gender and ST-elevation myocardial infarction”, which discussed the results of the study by Sambola et al.¹ and those of our study.²

The apparent contradictions between them may be for the following reasons: *a*) our study was based on data from an official audited registry, the *Registro Codi IAM* for Catalonia, on a reperfusion program in acute ST-segment elevation myocardial infarction (STEMI), which prioritized primary angioplasty (PA); *b*) the cohort was a homogeneous population with ischemic heart disease: patients with first acute STEMI and final diagnosis of infarction (20% of those with initial suspicion were excluded); the comparison of heterogeneous cohorts can involve differences in age and the prevalence of risk factors; *c*) the in-hospital mortality was not published due to the high rate of transfer from the hospital where PA was performed. If we exclude the transferred patients (12% for the study by Sambola et al.¹), the patient profile would be skewed upward; *d*) the raw mortality data were influenced by the large age difference between men and women, so we decided not to publish them and instead focused on the total mortality reported by the National Institute of Statistics; *e*) given the impossibility of including other risk factors (collected from 2015 onward) in the models and the importance of age, we decided to match for age: the odds ratio/hazard ratio (OR/HR) of the adjustment variables were not shown, as they should not be interpreted in models that evaluate the specific effect of the variable of interest, in this case sex; nor were the discrimination capacities and goodness-of-fit described, because the objective was not to obtain predictive models, but rather to estimate the possible effect of patient sex on mortality; regardless of this consideration, the area under the curve (AUC) at 30 days was 82.6% [84.2%–85.8%] and at 1 year was 80.0% [77.8%–82.2%], and Hosmer-Lemeshow goodness-of-fit, chi-square = 39.1; $P < .001$ at 30 days and chi-square = 17.1; $p = .047$ at 1 year; and *f*) treatment delays must also be considered as confounders of the effect of sex: Sambola et al. reported lower mortality in women treated within a structured reperfusion network than outside of such a network, and, in 2015, the last year common to both studies, the rate of PA in the study by Sambola et al. was 51.7% for women vs 68% for men, and in our study the rate of PA within 120 minutes was 65% vs 71%.

Due to all these factors, we are of the opinion that: *a*) it is difficult to compare these studies; *b*) the in-hospital mortality varied greatly depending on the hospital, province, and autono-

mous community where the patients were treated; *c*) the strategy of reperfusion within a network has benefits for both sexes, perhaps more so in women; and *d*) the inequalities in mortality between the sexes detected more than 20 years ago³ have been overcome, largely due to the structured reperfusion strategy, the *Codi IAM* in Catalonia, in line with what our group observed in a different patient cohort.⁴

Helena Tizón-Marcos,^{a,b,c,e} Isaac Subirana,^{b,d} and Jaume Marrugat^{b,e}

^a*Servicio de Cardiología, Hospital del Mar, Grupo de Investigación Biomédica en Enfermedades del Corazón, IMIM, Barcelona, Spain*

^b*Instituto Hospital del Mar de Investigaciones Médicas (IMIM), Barcelona, Spain*

^c*Facultat de Medicina, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain*

^d*Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Spain*

^e*Centro de Investigación Biomédica en Red de Enfermedades Cardiovasculares (CIBERCV), Spain*

* Corresponding author:

E-mail address: htizon@parcdesalutmar.cat (H. Tizón-Marcos).

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Relationship between patent foramen ovale and COVID-19 in patients admitted to an intensive care unit



Foramen oval permeable en pacientes ingresados por COVID-19 en cuidados intensivos

To the Editor,

In December 2019, an outbreak of coronavirus disease 2019 (COVID-19), which was caused by severe acute respiratory

syndrome coronavirus 2 (SARS-CoV-2), broke out in Wuhan, China.^{1,2} COVID-19 was of clustering onset and mainly affected the respiratory system with some patients rapidly progressing to acute respiratory distress syndrome (ARDS).^{3,4} Evidence shows that, while patients with COVID-19-associated respiratory distress syndrome meet the Berlin criteria for ARDS, they generally present with an atypical form of this syndrome.⁵