### Comment on the Article "Simultaneous Percutaneous Closure of Patent Foramen Ovale and Left Atrial Appendage." Response

# Comentario al artículo «Cierre percutáneo simultáneo de foramen oval permeable y orejuela izquierda». Respuesta

#### To the Editor.

We would like to thank the authors of the comment on our study for the interest they have shown in our work, 1 as well as the Editorial Board of the journal for providing us with the opportunity to respond.

We are largely in agreement with the comments that they make, but we would nevertheless like to clarify the following points:

- 1. The ostium of the left appendage is, as they stated, not completely circular in most patients, but it is nevertheless flexible enough to adapt to the circular geometry of the device.
- 2. The self-expanding nitinol devices used for closure of cardiovascular defects (atrial and ventricular shunting, patent ductus arteriosus, vascular stenosis, etc.) are self-centering and adapt to the shape (not necessarily circular) of the abnormalities that they are intended to treat. This same principle explains the effectiveness of the Amplatzer Cardiac Plug (ACP) for closure of the left atrial appendage.
- 3. The devices used are semipatent, and so they initially allow a small residual flow. The observations made by 2D, 3D, and Doppler color echocardiography show complete closure (absence of flow) in the appendage in more than 95% of cases, once the adaptation of the ACP to the appendage has been accomplished and subsequent endothelization and organization

has occurred. We therefore think that the moment to define whether or not flow is present is after 3 months have passed, and this is when we should judge whether complete closure has occurred.

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#### **REFERENCES**

- 1. Paulo M, García E, Hernández-Antolín RA, Almería C. Cierre percutáneo simultáneo de foramen oval permeable y orejuela izquierda. Rev Esp Cardiol. 2011;64:1215–6.
- 2. Reddy VY, Holmes D, Doshi SK, Neuzil P, Kar S. Safety of percutaneous left atrial appendage closure: results from the Wachman Left Atrial Appendage System for Embolic Protection in Patients with AF (PROTECT AF) Clinical Trial and the Continued Acess Registry. Circulation. 2011;123:417–24.

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## Prognosis for Patients With Heart Failure With Preserved Ejection Fraction

# Pronóstico de los pacientes con insuficiencia cardiaca y fracción de eyección preservada

#### To the Editor,

We read with great interest the editorial by Doughty<sup>1</sup> concerning the prognosis of patients with heart failure and preserved ejection fraction published in your journal, in which the author points out that the majority of the patients included in clinical trials do not represent the real situation encountered in clinical practice. This fact is especially relevant in hospital emergency departments. Recently, our working group analyzed the data of the Epidemiology Acute Heart Failure Emergency (EAHFE) study,<sup>2,3</sup> a project involving 9 hospitals in which all the patients diagnosed as having acute heart failure admitted to a hospital emergency department over a 2-month period were consecutively enrolled. Data were collected on the clinical profile of each patient and on the short-term outcome (in-hospital mortality, 30-day mortality, and 30-day follow-up visit). A retrospective investigation was carried out to determine whether there was a previous echocardiogram and, when available, whether the left ventricular ejection fraction had been quantified. In addition, ventricular function was defined as depressed or preserved depending on whether the ejection fraction was ≤45% or >45%, respectively. Of the 997 patients included, 547 (54.9%) had undergone echocardiography and the status of the ventricular

function was known in 476: it was depressed in 273 (57.4%) and preserved in 203 (42.6%). Among the patients with depressed systolic function, there were more men, young people, active smokers, individuals with ischemic heart disease, and those with signs of left heart failure. No significant differences were observed between the outcomes of patients with preserved and depressed systolic in terms of any of the three parameters evaluated (in-hospital mortality, 4.4% and 4.3%, respectively [P=.67]; 30-day mortality, 9.5% and 9.4%, respectively [P=.95]; 30-day follow-up visit, 28.2% and 24.6%, respectively [P=.38]). The odds ratios for all these comparisons were always very close to 1, results very similar to those of other registries such as the OPTIMIZE-HF Registry.4 Thus, we agree with the author of the editorial in that individuals with heart failure and preserved ejection fraction are an important group of patients, even in the context of hospital emergency departments, although we found a similar mortality rate in both groups.

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#### **REFERENCES**

- 1. Doughty RN. Pronóstico de los pacientes con insuficiencia cardiaca y fracción de eyección preservada ¿Es el mismo que con fracción de eyección baja? Rev Esp Cardiol. 2011:64:646-8.
- 2. Jacob Rodríguez J, Herrero Puente P, Martín Sánchez FJ, Llorens P, Miró O, Perelló R, et al. Estudio ECO-EAHFE: análisis de los pacientes con ecocardiografía realizada

- previamente a una visita en urgencias por episodio de insuficiencia cardiaca aguda. Rev Clin Esp. 2011;211:329–37.
- 3. Llorens P, Martín-Sánchez FJ, González-Armengol JJ, Herrero P, Jacob J, Álvarez AB, et al. Perfil clínico del paciente con insuficiencia cardiaca aguda atendido en los servicios de urgencias: Datos preliminares del Estudio EAHFE (Epidemiology Acute Heart Failure Emergency). Emergencias. 2008;20:154–63.
- Fonarow GC, Stough WG, Abraham WT, Albert NM, Gheorghiade M, Greenberg BH, et al. Characteristics, treatments, and outcomes of patients with preserved systolic function hospitalized for heart failure: a report from the OPTIMIZE-HF Registry. J Am Coll Cardiol. 2007;50:768–77.

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