

Letters to the Editor

Evidence From Pacing in Obstructive Hypertrophic Cardiomyopathy



Evidencia del tratamiento con marcapasos en la miocardiopatía hipertrófica obstructiva

To the Editor,

We have read with great interest the article by Jurado Román et al,¹ in which they conclude that, in selected patients with obstructive hypertrophic cardiomyopathy and disabling symptoms, prolonged atrioventricular (AV) sequential pacing could improve the functional class and reduce the left ventricular outflow tract gradient and mitral regurgitation both acutely, following device implantation, and over the long term, with no negative effects on left ventricular systolic or diastolic function. Having read the article, we would like to make a few comments.

According to the latest guidelines on hypertrophic cardiomyopathy published by the European Society of Cardiology,² permanent AV sequential pacing with a short AV interval could be considered in inadequately controlled, symptomatic patients who have refused other invasive therapeutic options involving septal reduction, or in those with other indications for pacing (class IIb recommendation, level C evidence). The guidelines applied in the United States agree in this respect, although in patients with another indication, the recommendation is class IIa, with level B evidence in both cases. These indications are based on the conclusions of 3 small, randomized, placebo-controlled studies of AV sequential pacing and on several observational studies that report the reduction of the left ventricular outflow tract gradients with improvement in symptoms and quality of life.^{3,4} However, a recent Cochrane review concluded that the existing data on the beneficial effects of pacing are based on physiological measurements and that, as yet, there is a lack of information on the clinically relevant benefits.⁵

In 2009, our group published the experience of 2 Spanish referral hospitals in hypertrophic cardiomyopathy,⁶ and the data agree with those reported in the Cochrane review. Like Jurado Román et al,¹ we found benefits from pacing in terms of decreases in the left ventricular outflow tract gradient and maximal left ventricular wall thickness and a subjective improvement in function, estimated according to the New York Heart Association (NYHA) classification. However, this improvement was not confirmed by the exercise stress test, in which there were no significant changes in either the metabolic equivalent of task (MET) or in test duration. Functional class improved in 43.1% of the patients rather than the 95% reported by Jurado Román et al¹ and, although those authors found no sex-related differences in improvement, in our study, female sex was associated with a clinical improvement in twice as many patients. In the patients showing clinical improvement, echocardiography revealed a significant decrease in left ventricular wall thickness and maximal wall thickness (greater as follow-up advanced), as well as in the left ventricular outflow tract gradient.

Thus, we should stress the limited role that the guidelines attribute to AV sequential pacing in the treatment of obstructive hypertrophic cardiomyopathy because, in agreement with the results of previous multicenter trials,⁷ the reductions obtained in the subaortic gradient and the maximal left ventricular wall thickness have not been found to correlate with a clinical benefit or a reduction in long-term events, effects achieved with myectomy.² Despite this limited impact, pacemakers could continue to be a strategy in certain patients as they are less invasive than other options and are associated with lower morbidity and mortality rates than more invasive treatments. Moreover, access to centers experienced in surgical or hemodynamic procedures for the treatment of this disease is not “universal”, whereas pacemaker implantation is a widely used technique.

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