

Clinical and gated SPECT MPI parameters associated with super-response to cardiac resynchronization therapy

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Abstract

Purpose We sought to evaluate the behavior of cardiac mechanical synchrony as measured by phase SD (PSD) derived from gated MPI SPECT (gSPECT) in patients with super-response after CRT and to evaluate the clinical and imaging characteristics associated with super-response. **Methods** 158 subjects were evaluated with gSPECT before and 6 months after CRT. Patients with an improvement of LVEF > 15% and NYHA class I/II or reduction in LV end-systolic volume > 30% and NYHA class I/II were labeled as super-responders (SR). **Results** 34 patients were classified as super-responders (22%) and had lower PSD (32 degrees +/- 17 degrees) at 6 months after CRT compared to responders (45 degrees +/- 24 degrees) and non-responders 46 degrees +/- 28 degrees (P = .02 for both comparisons). Regression analysis identified predictors independently associated with super-response to CRT: absence of previous history of CAD (odds ratio 18.7; P = .002), absence of diabetes mellitus (odds ratio 13; P = .03), and history of hypertension (odds ratio .2; P = .01). **Conclusion** LV dyssynchrony after CRT implantation, but not at baseline, was significantly better among super-responders compared to non-super-responders. The absence of diabetes, absence of CAD, and history of hypertension were independently associated with super-response after CRT.

Palabras clave

Palabras clave de autor: [Heart failure](#); [cardiomyopathy](#); [SPECT](#); [dyssynchrony](#); [gated SPECT](#); [MPI](#)

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