Conclusions CRT response score could predict reverse remodelling and 12-month event free survival effectively after CRT

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CRT RESPONSE SCORE PREDICTS THE EFFECTS OF CARDIAC RESYNCHRONISATION THERAPY

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Background and objectives The effectiveness of cardiac resynchronisation therapy (CRT) has been verified by large multi-centre studies, but non-response phenomenon occurs in about 30% of patients according to the indications of CRT recently. This study was designed to evaluate factors that affect the effects of CRT, summarise CRT response score to predict clinical effects.

Methods From December 2001 to August 2009, 110 patients with chronic heart failure were enrolled in this study. The patients underwent a clinical examination, 12-lead electrocardiography, echocardiographic evaluations before implantation. Patients were divided into control and response group which was defined as decrease of left ventricular end diastolic diameter $\geq 15\%$ at six month after operation. The follow-up duration was 12 months. The clinical end point considered was cardiovascular death and hospitalisation due to heart failure.

Results CRT-P/D devices were successfully implanted in 107 patients. 61.3% of the patients showed a response to CRT. Multiple logistic regression identified an independent association between duration of heart failure, ischaemic cardiomyopathy, Δ QRS, septal-to-posterior wall motion delay (SPWMD) and effects of CRT. 4 score was assigned to duration of heart failure ≥ 5.0 years, ischaemic cardiomyopathy, Δ QRS < 26.8 ms, SPWMD < 167.6 ms. Patients would have adverse reverse remodelling and 12-month event free survival with the increasing of CRT response score (0–4 points).