



INDUCTION OF LEFT VENTRICULAR DYSSYNCHRONY AND ITS POTENTIAL CONSEQUENCES ON PROGNOSIS OF PATIENTS TREATED WITH CARDIAC RESYNCHRONIZATION THERAPY

ACC Poster Contributions

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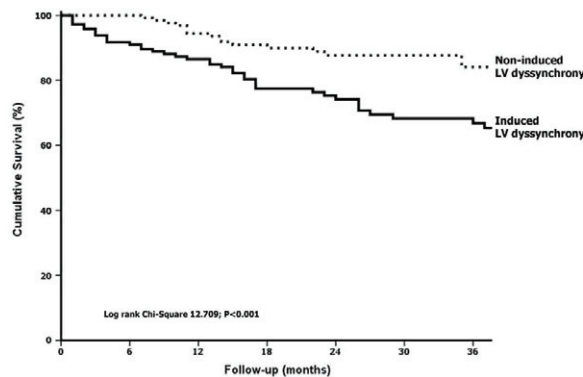
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Background Little is known about the effect of cardiac resynchronization therapy (CRT) on patients without baseline left ventricular (LV) dyssynchrony. The evolution of LV dyssynchrony with CRT and the prognosis of those patients were further examined.

Methods Two-hundred ninety heart failure patients (age 67 ± 10 years, 81% male) without significant baseline LV dyssynchrony (septal-to-lateral wall delay <60 ms) undergoing CRT device implantation were selected. All-cause mortality was recorded during a median long-term follow-up of 23 months and compared to the all-cause mortality rate of a group of 151 frequency-matched heart failure patients with significant baseline LV dyssynchrony (≥ 60 ms) treated with CRT.

Results At 48 hours after CRT implantation, LV dyssynchrony significantly increased from 22 ms (interquartile range: 16-34 ms) to 40 ms (interquartile range: 24-56 ms) ($P < 0.001$). Patients with induced LV dyssynchrony (≥ 40 ms) had significantly higher mortality rate than the patients of the non-induced LV dyssynchrony group (< 40 ms) (24.7% vs 12.3% respectively; Log rank chi-square=12.709, $P < 0.001$) and the group of patients with significant baseline LV dyssynchrony (24.7% vs 9.4%; Log rank chi-square=17.537; $P < 0.001$). Induction of LV dyssynchrony was an independent predictor of mortality (Hazard ratio: 1.247; $P = 0.009$).

Conclusion In patients without significant LV dyssynchrony, the induction of LV dyssynchrony after CRT is related to less favorable long-term outcome.



Number at risk	0	6	12	18	24	30	36
Non-induced LV dyssynchrony	145	130	115	91	78	62	42
Induced LV dyssynchrony	145	131	108	80	68	53	47