The clinical outcome of cardiac resynchronization therapy in dilated-phase hypertrophic cardiomyopathy

Statement of the Problem: Clinical trials have demonstrated that cardiac resynchronization therapy (CRT) is effective in patients with non-ischemic cardiomyopathy. However, patients with dilated-phase hypertrophic cardiomyopathy (DHCM) have been generally excluded from such trials. We aimed to compare the clinical outcome of CRT in patients with DHCM, idiopathic dilated cardiomyopathy (IDCM) or ischemic cardiomyopathy (ICM).

Methodology & Theoretical Orientation: A total of 312 consecutive patients (DHCM=16; IDCM=231; ICM=65) undergoing CRT in Fuwai hospital were studied respectively. Response to CRT was defined as reduction in left ventricular end-systolic volume (LVESV) ≥15% at six-month follow-up.

Findings: Compared with DHCM, IDCM was associated with a lower total mortality [hazards ratio, HR: 0.35 (95% confidence interval, CI 0.13-0.90)], cardiac mortality [HR: 0.29 (95% CI 0.11-0.77)] and total mortality or heart failure (HF) hospitalizations [HR: 0.34 (95% CI 0.17-0.69)], independent of known confounders. Compared with DHCM, the total mortality, cardiac mortality and total mortality or HF hospitalizations favored ICM but were not statistically significant. [HR: 0.59 (95% CI 0.22-1.61); HR: 0.59 (95% CI 0.21-1.63); HR: 0.54 (95% CI 0.26–1.15) respectively]. Response rate to CRT was lower in the DHCM group than the other two groups although the differences didn’t reach statistical significance.

Conclusion & Significance: Compared with IDCM, DHCM was associated with a worse outcome after CRT; the clinical outcome of DHCM patients receiving CRT was similar to or even worse than that of ICM patients. These indicate that DHCM behaves very differently after CRT.

Biography
Wei Hua is a Professor of Cardiology, Deputy Director at Cardiac Arrhythmia Center, Fuwai Hospital & Cardiovascular Institute, Chinese Academy of Medical Sciences, Peking Union Medical College, China. He completed his MD at Shanghai Medical University in 1985 and then PhD at Graduate School of Peking Union Medical College. He joined Fuwai Hospital & Cardiovascular Institute in 1985 and became full Professor of Cardiology in 1999. He was trained in Cardiac Pacing and Electrophysiology in Royal Melbourne Hospital, Australia, from 1994-1996. His main work is on “Clinical cardiac pacing and electrophysiology, cardiac arrhythmias service”. He is now Vice Chairman of Chinese Society of Pacing and Electrophysiology (CSPE) and Chairman of Cardiac Pacing Committee of CSPE. He is a Fellow of Heart Rhythm Society (FHRS), European Heart Rhythm Association (EHRA) and New York Academy of Sciences.

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