CLINICAL RESPONSE TO MULTISITE BIVENTRICULAR PACING

Poster Contributions
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Background: Lack of response to cardiac resynchronization therapy (CRT) remains a clinical challenge and is predominantly attributed to suboptimal LV lead positioning. Multisite pacing (MS-CRT) has emerged as an alternative to biventricular pacing, however clinical responses have not been thoroughly investigated.

Methods: 66 patients (45 males) with CHF (NYHA III and ambulatory III) underwent initial MS-CRT (ICRT, n=49) or upgrade to MS-CRT from standard CRT after worsening of clinical status or adverse remodeling (UCRT, n=17). Major adverse clinical events (MACE) were death, heart failure (HF) hospitalization and cardiac transplantation or ventricular assist device implant at one year.

Results: Clinical characteristics and baseline LVEF, were similar between groups except for AF (64.7% vs 33.3% for the UCRT and ICRT groups, p=0.025) and history of ventricular arrhythmias (41.3% vs 16.7% for the UCRT and ICRT groups, p=0.039). Mean LVEF change after implant was not different between the ICRT and UCRT groups (8.0±8% vs 4.1±6.3%, p=0.27). At one year, the probability for MACE was similar between the two groups (LR=0.892). Time to first HF hospitalization was not different between groups (222.3±134d vs 267.2±118d for the ICRT and UCRT groups, p=0.818).

Conclusions: Upgrade to MS-CRT in CRT non-responders results in clinical response similar to the observed response with initial MS-CRT implant. Multisite pacing may be useful in CRT non responders.