SHOULD WE ABANDON CARDIA RESYNCHRONIZATION THERAPY IMPLANTATION IN PATIENTS WHO HAVE EXTENSIVE POSTERO LATERAL SCAR ON MAGNETIC RESONANCE IMAGING: A META ANALYSIS

Poster Contributions
Hall C
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Background: CRT has been shown to reduce morbidity and mortality in select heart failure patients. Upto 30-40% of heart failure patients may not respond to CRT. These, include patients with transmural scar in the posterolateral wall. Therefore, CMR Imaging was felt to be useful tool to assess patients for CRT.

Methods: We conducted Medline/PubMed, EMBASE, Cochrane, Ovid, Scopus and Google Scholar serches for studies published between Jan 2000 and July 2013. Keywords included all combinations of CRT/CRT-D or Pacemaker Therapy, Cardiac MRI and Scar or Scar Pacing. Prospective and Retrospective observational studies were selected. The Outcome of interest was clinical and Echocardiographic response to CRT. We included all studies describing response to CRT in Heart Failure patients who show scar transmurality at posterolateral wall and those who have scar with LV pacing region

Results: CRT Response: Eight studies identified in total. Five of them assessed clinical and/or echocardiographic response to CRT therapy in heart failure patients, who show scar transmurality at posterolateral wall. The total number of patients were 239 with 197 having Ischemic Cardiomyopathy. Group 1: 63 Transmural Posterolateral Scar Group 2: 176 Non transmural posterolateral scar, or non posterolateral scar or No scar. By Random Effect Meta-Analysis, we found that in Group 1 clinical response(75% lower) and ECHO response(73% lower) to CRT compared to Group 2 Left Ventricular Pacing Response: Six out of eight studies evaluated, if the presence of scar tissue within the left ventricular pacing region will influence the response to CRT therapy. The total number of patients were 409 with 177 of them had Ischemic cardiomyopathy. Group 3: 101 Significant Scar Pacing Group 4: 308 Non-Significant Scar Pacing By Random Effect Meta-Analysis, we found that the clinical and ECHO response in Group 3 (67% lower ) and ECHO response (44% lower) compared to those with Group 4

Conclusions: The presence of transmural posterolateral scar tissue and significant scar within the LV pacing region or segments results in clinical and echocardiographic non-response to CRT