**BENEFIT OF AV- AND VV-DELAY OPTIMIZATION IN PATIENTS TREATED WITH CARDIAC RESYNCHRONIZATION THERAPY: A META-ANALYSIS**

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Background**:** Optimization of the atrio-ventricular (AV) and ventriculo-ventricular (VV) delays of cardiac resynchronization therapy (CRT) devices enhances left ventricular (LV) performance. However, no recommendation has been established on the pertinence of AV and/or VV delay optimization in CRT patients. Thus, a systematic review and meta-analysis of the effects of AV and VV delay optimization on clinical and echocardiographic end points of heart failure patients treated with CRT was conducted.

Methods**:** A systematic search strategy was performed and identified 10 randomized and non-randomized trials comparing the effects on clinical and echocardiographic outcomes of AV and/or VV delay optimizations to conventional CRT device programming. Pooled odds ratios were analyzed using a random effect meta-analysis with Mantel-Haenszel (M-H) method.

Results: Combined data from a total of 3394 heart failure patients treated with CRT showed no differences in clinical or echocardiographic outcomes between patients who underwent AV and/or VV optimization and patients who underwent empiric device programming (M-H odds ratio=1.14 [95% confidence interval 0.85-1.53], P value for overall effect =0.37 by available cases analysis; see figure).

Conclusion**:** Current literature indicates that in heart failure patients undergoing CRT, AV and/or VV delays optimization does not provide incremental clinical or echocardiographic benefit over conventional device settings.

