**EFFECT OF ECHO CONTRAST ON WALL THICKNESS MEASUREMENTS: COMPARISON WITH MRI**

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We evaluated whether echo contrast affects the accuracy of left ventricular wall thickness measurements.

Methods: Patients underwent both echo with (C) and without (NC) Definity contrast. Cardiac MRI white-blood sequences were used as the standard for the thickness of myocardium. Group 1 had 9 volunteer subjects with no history of cardiovascular disease and normal LV thickness (normal). Group 2 had 9 patients with echocardiographic left ventricle hypertrophy (LVH). Analysis included mixed-model ANOVA followed by Tukey’s HSD method of multiple comparisons

(p<0.05 was significant).

Results: The entire group and the 2 subgroups were analyzed for comparative thickness measures in mm+SE. Overall the difference between the mean measurements in C vs MRI group was not significant (p value= 0.50) whereas the mean measurements between NC vs MRI group were significantly different

(p value <0.0001). During subgroup analysis the measurement between C vs MRI and NC vs MRI were significantly different in normal show while in patients with LVH C and MRI were closely associated with each other.

Conclusion: Overall, using NC overestimated MRI wall thickness. This was significantly improved by the use of C. This effect was especially true for those with LVH.

In normals, C led to an underestimation of MRI wall thickness. The effect of C on wall thickness measurements depends on the clinical substrate being evaluated.