

Arrhythmias and Clinical EP

VARIABILITY IN LEFT VENTRICULAR EJECTION FRACTION BY RADIONUCLIDE MULTIGATED ACQUISITION SCAN VERSUS ECHOCARDIOGRAPHY: IMPLICATIONS FOR PRIMARY PREVENTION IMPLANTABLE CARDIOVERTER DEFIBRILLATORS

Poster Contributions
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Background: In patients with a left ventricular ejection fraction (LVEF) $\leq 35\%$, randomized clinical trials have demonstrated the benefit of implantable cardioverter defibrillators (ICDs) in the primary prevention of sudden cardiac death. However, the modality for LVEF assessment was not mandated, and variability in LVEF assessment could lead to different recommendations regarding ICDs. Our aim was to evaluate the discrepancy between radionuclide multigated acquisition (MUGA) scan and echocardiography in LVEF assessment and its implications for primary prevention ICD.

Methods: All consecutive patients who had both a MUGA scan and an ECHO within 30 days at our institution between Jan 2011 and Dec 2015 were included. We excluded patients who received cardiotoxic medications or had a medication change between the two studies.

Results: In 91 patients, the mean age was 62 ± 13 years, most were male (60%), and the median interval between the 2 studies was 7 days. The mean LVEF by MUGA was $53 \pm 14\%$ and was $45 \pm 14\%$ by echocardiography. Upon comparison, the mean difference in the means was 7%. When primary prevention ICD would be indicated by either of the 2 modalities, discordance was more common than concordance (17 vs. 7 patients, Fig 1A). Much of the discordance was related to patients with mildly or moderately reduced LVEF (Fig 1B).

Conclusions: In patients with mildly or moderately reduced LVEF, the modality of LVEF assessment could alter the recommendation for a primary prevention ICD as mandated by current guidelines.

