CARDIAC I-123 METAIODOBENZYLGUANIDINE IMAGING COULD IDENTIFY PATIENTS WITH CHRONIC HEART FAILURE AND LVEF<35% AT LOW RISK FOR SUDDEN CARDIAC DEATH FOR FIVE YEARS

Poster Contributions
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Background: Patients (pts) with chronic heart failure (CHF) at risk of sudden cardiac death (SCD) are often treated with implantable cardiac defibrillator (ICD), but current criteria for device use, based largely on LVEF, leads many pts receiving ICDs that never deliver therapy. It is of clinical significance to identify CHF pts with reduced LVEF who do not require ICD. Although cardiac MIBG imaging provides prognostic information in CHF pts, it remains unclear whether the MIBG imaging could identify CHF pts at low risk for SCD without the requirement of ICD.

Methods: We studied 81 CHF pts with LVEF<35%(26±6%), who were completely followed up for 5 years after cardiac MIBG imaging. We divided the heart to mediastinum ratio (H/M) at the delayed image and washout rate (WR) into 6 grades, scored as 0 to 5, according to the deviation degree of normal control values (H/M:2.65±0.32, WR:9.6±8.5%), respectively, and these pts were classified into 3 groups according to the MIBG score defined as the sum of WR and H/M scores; low (1-4), intermediate (5-8) and high (9-11) score groups.

Results: During the follow-up period, 11 pts had SCD. At Cox analysis, only MIBG score was significantly associated with SCD. Pts with low MIBG score had significantly lower risk of SCD (low (n=19); 0%, intermediate (n=37); 11%, high (n=25); 28%, p=0.028). Positive predictive value of low MIBG score for the identification of pts without SCD was 100%.

Conclusions: The cardiac MIBG score could identify CHF pts with LVEF<35% at low risk of SCD for 5 years.