PROGNOSTIC SIGNIFICANCE OF HOLTER-DETECTED VENTRICULAR ARRHYTHMIAS IN MADIT-CRT PATIENTS

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
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Session Title: ECG/Ambulatory Monitoring - Prognosis in Heart Failure
Abstract Category: 30. ECG/Ambulatory Monitoring Signal Averaging
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Background. There are limited data regarding the prognostic significance of Holter-detected ventricular arrhythmias in HF pts undergoing CRT. We aimed to determine whether NSVT and frequent ventricular premature beats (VPBs) are predictive for events in MADIT-CRT pts treated with CRT-D.

Methods. 24-hour Holter recordings were performed at enrollment in 947 pts enrolled in the CRT-D arm of the trial. Presence of NSVT and frequent VPBs were evaluated in relationship to clinical presentation, endpoints, and CRT-induced echo changes.

Results. At least one run of NSVT was found on Holter in 470 (50%) pts and frequent >1000 VPBs/24 hour in 383 (40%) pts (291 [31%] pts had both). Pts with NSVT were older, more frequently males, had lower EF, higher BNP, and larger LV volumes (p<0.05 for all). However, they experienced less LV volumes reductions in response to CRT (LVESV reduction: 29% in pts with VT vs. 36% in pts without VT; p<0.001). Table shows hazard ratio for NSVT in predicting primary endpoint (HF event or death) and for ICD documented VT/VF endpoint, separately in ischemic and nonischemic pts after adjustment for clinical covariates. Results were similar for frequent VPBs regardless of NSVT.

Conclusions. NSVT, detected on Holter recordings, in MADIT-CRT pts are predictive for HF endpoints and for VT/VF endpoint in nonischemic but not in ischemic cardiomyopathy pts. Patients with VT and frequent VPBs have less CRT-induced reduction in LV volumes.

Endpoints

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Ischemic (n=521)</th>
<th>Nonischemic (n=426)</th>
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<tbody>
<tr>
<td></td>
<td>HR</td>
<td>p value</td>
</tr>
<tr>
<td>HF event or death</td>
<td>0.88</td>
<td>0.551</td>
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<tr>
<td>ICD documented VT/VF</td>
<td>0.81</td>
<td>0.503</td>
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