Approximately 3 to 4% of African Americans carry a transthyretin (TTR) valine-to-isoleucine substitution (V122I), which is most frequent mutation V122I carriers have modestly risk of heart failure and relatively low prevalence of overt left ventricular (LV) abnormalities Amyloid can virtually infiltrate all cardiac chambers and cardiac amyloidosis is characterized by significant left atrial (LA) dilatation and dysfunction

**Table 1. Clinical and echocardiographic findings between V122I noncarriers vs. carriers**

<table>
<thead>
<tr>
<th></th>
<th>Noncarriers</th>
<th>Carriers</th>
<th>Unadjusted</th>
<th>Adjusted P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at Visit 5 (years)</td>
<td>74 ± 5.0</td>
<td>72.9 ± 4.3</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>Female sex, n (%)</td>
<td>787 (66.2)</td>
<td>330 (73.3)</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Body mass index (kg/m²)</td>
<td>30 ± 6.7</td>
<td>28.7 ± 5.1</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Absolute LV mass index (g/m²)</td>
<td>1174 (94.5)</td>
<td>41 (8.9)</td>
<td>0.12</td>
<td>0.16</td>
</tr>
<tr>
<td>Anti-hypertensive medications at Visit 5, n (%)</td>
<td>1021 (87.9)</td>
<td>39 (8.4)</td>
<td>0.57</td>
<td>0.73</td>
</tr>
<tr>
<td>Diabetes mellitus at Visit 5, n (%)</td>
<td>562 (47.7)</td>
<td>18 (3.9)</td>
<td>0.26</td>
<td>0.49</td>
</tr>
<tr>
<td>Prior heart failure at Visit 5, n (%)</td>
<td>219 (18.6)</td>
<td>11 (2.3)</td>
<td>0.36</td>
<td>0.21</td>
</tr>
<tr>
<td>Prior MI at Visit 5 (%)</td>
<td>90 (44.5)</td>
<td>62 (13.4)</td>
<td>0.43</td>
<td>0.01</td>
</tr>
<tr>
<td>Mean wall thickness (mm)</td>
<td>1.0 ± 0.1</td>
<td>1.0 ± 0.2</td>
<td>0.20</td>
<td>0.036</td>
</tr>
<tr>
<td>LA volume indexed (mL/m²)</td>
<td>79.3 ± 21.8</td>
<td>83.0 ± 22.4</td>
<td>0.13</td>
<td>0.06</td>
</tr>
<tr>
<td>IVAR (mean)</td>
<td>614 ± 70.4</td>
<td>934 ± 87.7</td>
<td>0.23</td>
<td>0.15</td>
</tr>
<tr>
<td>E’ (mean)</td>
<td>11.5 ± 4.2</td>
<td>12.8 ± 4.6</td>
<td>0.035</td>
<td>0.032</td>
</tr>
<tr>
<td>Fractional LA reservoir longitudinal strain (LS) (%)</td>
<td>175 ± 2.7</td>
<td>16.6 ± 2.6</td>
<td>0.037</td>
<td>0.011</td>
</tr>
</tbody>
</table>

**Results**

Proportion of abnormality in LA function

<table>
<thead>
<tr>
<th></th>
<th>Unadjusted</th>
<th>Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA reservoir LS ≥ 5.25%</td>
<td>125 (25.6)</td>
<td>10 (2.5)</td>
</tr>
<tr>
<td>LA contractile LS ≥ 15%</td>
<td>10 (27.0)</td>
<td>10 (27.0)</td>
</tr>
</tbody>
</table>

**Figure 2. LA strain analysis (dedicated software from Philips)**

**Figure 3. Proportion of abnormality in LA function**

**Figure 1. Patient flow**

**Conclusions**

LA enlargement and dysfunction were more common in V122I TTR carriers with sinus rhythm, suggesting that LA assessment may serve as an early marker of subclinical disease in elderly African-Americans

**Limitations**

Our cross-sectional study did not allow speculation concerning the natural history of amyloid infiltration in the heart

We did not evaluate definitive confirmation of cardiac involvement, assessed by endomyocardial biopsy or radionuclide images

LA strain measurements were performed only in 4-chamber views

**Disclosures**

Dr. Minamisawa received grants from the Japanese Circulation Society, the Japanese Ministry of Health, Labor and Welfare, and the Uehara Memorial Foundation Overseas Research Fellowship. Dr. Solomon received research grants from Amgen, Argenta, Amgen, Cytokinetics, Elan, Genentech, Gilead, GSK, Idenix, Lone Star Heart, Myoblast, Myocardia, Myolift, Novartis, Nordic Perkhist, Thrombogenics, and was consulted for Anaren, Alnylam, Amgen, Amgen, Amgen, Bayer, BMS, Cardio, Corvus, Cytokinetics, Gilead, GSK, Idenix, InterVenn, Merck, Novartis, Roche, Sanofi, Thrombogenics, Texas Heart Institute, and Tricor. Agreement, Amgen, Amgen, Amgen, Bayer, BMS, Cardio, Corvus, Cytokinetics, Gilead, GSK, Idenix, InterVenn, Merck, Novartis, Roche, Sanofi, Thrombogenics, Texas Heart Institute, and Tricor.

**Background**

Approximately 3 to 4% of African Americans carry a transthyretin (TTR) valine-to-isoleucine substitution (V122I), which is most frequent mutation V122I carriers have modestly risk of heart failure and relatively low prevalence of overt left ventricular (LV) abnormalities

**Amyloid can virtually infiltrate all cardiac chambers and cardiac amyloidosis is characterized by significant left atrial (LA) dilatation and dysfunction** (Maurer MS, et al. Circulation HF. 2019) (Quarta CC, et al. NEJM. 2015)