Background: The short-term reliability of patient reported symptoms as a marker of atrial tachyarrhythmia or atrial fibrillation (AF) recurrence has been studied. However, the long-term correlation of symptoms with continuous monitoring of AT/AF episodes during pacing is unknown.

Methods: This prospective multicenter trial assessed the development of AT/AF in paced patients by examining the correlation of patient-reported symptoms with device-detected AT/AF event data in patients with bradyarrhythmias and >1 episode of AT/AF in the prior year. Full disclosure device datalogs with electrogram (EGM) validation of AT/AF events were obtained from a pacemaker (AT500, Medtronic) that records the daily frequency, atrial and ventricular cycle length, EGM, and duration of AT/AF episodes. Patients logged symptomatic events into the device memory via an external manual activator. Following a one-month lead-in period, patients were followed for an additional 12 months and were contacted weekly to ensure compliance with activator usage. Episodes were classified as symptomatic AT/AF, asymptomatic AT/AF, or symptomatic “non-AT/AF” depending on concordance between patient-reported symptoms and device-detected AT/AF.

Results: A total of 801 (412 men, 389 women) residents (mean age, 72 ± 14 years, range 18–103 years) were implanted and followed for 12±2 months. Arhythmia-related symptoms were noted in 8% of all device-detected AT/AF episodes (sensitivity). Only 19% of all patient symptoms were associated with device documented AT/AF events (positive predictive value). A paired analysis in a subset of patients (n=15) with both symptomatic and asymptomatic stored episodes indicated no difference (p=NS) with respect to median ventricular rate (94 vs 94 bpm), atrial and ventricular cycle length, EGM, and duration of AT/AF episodes. Patients logged symptomatic events into the device memory via an external manual activator. Following a one-month lead-in period, patients were followed for an additional 12 months and were contacted weekly to ensure compliance with activator usage. Episodes were classified as symptomatic AT/AF, asymptomatic AT/AF, or symptomatic “non-AT/AF” depending on concordance between patient-reported symptoms and device-detected AT/AF.

Conclusion: Short-term and long-term symptoms are associated with device-detected AT/AF in up to 20% of episodes. The long-term correlation of symptoms with AT/AF episodes is unknown.

Poster Session 1166
Atrial Fibrillation
Tuesday, March 09, 2004, 3:00 p.m.-5:00 p.m.
Morial Convention Center, Hall G
Presentation Hour: 4:00 p.m.-5:00 p.m.

1166-207
Long-Term Sensitivity and Positive Predictive Value of Symptoms as an Index of Atrial Tachyarrhythmia Recurrence in Paced Patients: A Report of Device-Based Monitoring in the Natural History of Atrial Fibrillation Trial
Adam Strickberger, John Ip, Sanjeev Sakseena, Kenneth Curry, Tristram Bohnson, Douglas Hettrick, Paul Ziegler, University of Michigan, Ann Arbor, MI

Background: There is a paucity of data on “silent” atrial fibrillation (AF). In this study, we aimed to estimate the prevalence of AF discovered incidentally in asymptomatic patients.

Methods: The medical records for all adult residents of Olmsted County, MN, who had an ECG-confirmed diagnosis of first AF during 1980-89 were reviewed. Symptom presentation was classified as typical for AF, non-specific (symptoms present, but not classic for AF), or “silent” (asymptomatic AF, detected incidentally).

Results: A total of 801 (412 men, 389 women) residents (mean age, 72 ± 14 years, range 18-103 years) were documented to have the first episode of AF between 1980 and 1989. AF was exclusion of patients (n=186, 23%) with concurrent conditions that could have obscured AF symptoms (recent myocardial infarction (MI) or congestive heart failure (CHF)), and those in whom symptom data were not available (n=59, 7%), silent AF was identified in 183 (24%). The remaining 363 patients had symptoms at presentation (typical AF, n=196; atypical AF, n=177). Clinical characteristics of AF versus those who presented with symptoms are detailed (Table). In a multivariate analysis, male gender (P<0.001), slower AF rate (P<0.001), and history of MI (P=0.028) were independently related to silent AF.

Conclusion: “Silent” AF accounts for a significant proportion of the total AF burden. Future studies to elucidate the outcomes for this subgroup of AF patients will be of immense public health importance.

Table

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>Silent AF</th>
<th>Symptomatic AF</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td>75 ± 12</td>
<td>70 ± 16</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Male, No (%)</td>
<td>105/54</td>
<td>176/48</td>
<td>0.18</td>
</tr>
<tr>
<td>ECG heart rate at incident AF documentation, bpm</td>
<td>104 ± 36</td>
<td>120 ± 32</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Systolic blood pressure, mm Hg</td>
<td>143 ± 21</td>
<td>141 ± 21</td>
<td>0.16</td>
</tr>
<tr>
<td>Diastolic blood pressure, mm Hg</td>
<td>81 ± 10</td>
<td>79 ± 10</td>
<td>0.07</td>
</tr>
<tr>
<td>History of CHF, No (%)</td>
<td>12 (6)</td>
<td>36 (10)</td>
<td>0.14</td>
</tr>
<tr>
<td>Hypertension, No (%)</td>
<td>159 (83)</td>
<td>273 (75)</td>
<td>0.05</td>
</tr>
<tr>
<td>Stroke or transient ischemic attack, No (%)</td>
<td>27 (14)</td>
<td>29 (8)</td>
<td>0.026</td>
</tr>
</tbody>
</table>

1166-210
Marion E. Barnes, Yoko Miyakawa, A. Gabriela Rosales, Kent R. Bailey, James B. Seward, Bernard J. Gersh, Teresa S.M. Tsang, Mayo Clinic Rochester, MN

Background: There is a paucity of data on “silent” atrial fibrillation (AF). In this study, we aimed to estimate the prevalence of AF discovered incidentally in asymptomatic patients.

Methods: The medical records for all adults residents of Olmsted County, MN, who had an ECG-confirmed diagnosis of first AF during 1980-89 were reviewed. Symptom presentation was classified as typical for AF, non-specific (symptoms present, but not classic for AF), or “silent” (asymptomatic AF, detected incidentally).

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Conclusion: “Silent” AF accounts for a significant proportion of the total AF burden. Future studies to elucidate the outcomes for this subgroup of AF patients will be of immense public health importance.