To identify country effects greater or less than the mean global event rate, empirical Bayes unadjusted event rates were calculated. There were wide variations in baseline characteristics between regions and countries (Table 1).

RESULTS

AIM

To define geographical variations in all-cause mortality, stroke/systemic embolism (SE) and major bleeding in patients with newly diagnosed non-valvular AF and to determine whether this variation is accounted for by baseline risk factors.

BACKGROUND AND CONTEXT

- Atrial fibrillation (AF) is the most common cardiac arrhythmia, affecting ~2%–10% of the general population and there are an estimated 30 million individuals affected worldwide.
- Studies of specific populations have shown wide variations in the management and outcomes of patients with AF. These may be influenced by baseline characteristics including gender and ethnicity.

Prior to the Global Anticoagulant Registry in the Field—Atrial Fibrillation (GARFIELD-AF) there were no large-scale multinational contemporary data to define the characteristics of patients with AF, their management and their outcomes.

GARFIELD-AF has recruited >57,000 patients from 35 countries, and has the potential to define the relationship between baseline characteristics and outcomes across diverse population practices and patient patterns.

METHODS

- GARFIELD-AF has broad inclusion criteria. Eligible patients are 18 years with newly diagnosed AF (≥6 weeks’ duration) non-valvular AF and ≥1 additional investigator-determined stroke risk factor.
- Baseline characteristics and 1-year event rates were analysed for 39,898 consecutive patients who were enrolled between Mar 2010 and Sep 2015 in 35 countries.
- We fitted a two-level mixed Weibull model on patients’ time-to-event nested for each country. The effect of including different patient-level baseline characteristics in the model was evaluated. A random intercept for each country was specified and adjusted for variables as defined in Figure 1.
- To identify country effects greater or less than the mean global event rate, empirical Bayes means of the posterior distribution of the random coefficients were estimated.

TABLE 1. Baseline characteristics of patients (n=39,898) in different regions and inter-country variation

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Europe (n=12,966)</th>
<th>Asia (n=9,477)</th>
<th>Latin America (n=11,979)</th>
<th>Other (n=6,486)</th>
<th>Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, yr (SD)</td>
<td>72.1 ± 10.5</td>
<td>70.7 ± 10.9</td>
<td>70.9 ± 9.6</td>
<td>71.1 ± 11.3</td>
<td></td>
</tr>
<tr>
<td>Mean BMI, kg/m² (SD)</td>
<td>29.3 ± 5.5</td>
<td>28.9 ± 5.3</td>
<td>28.9 ± 4.8</td>
<td>29.7 ± 5.2</td>
<td></td>
</tr>
<tr>
<td>History of hypertension, %</td>
<td>79.2</td>
<td>76.3</td>
<td>76.6</td>
<td>78.2</td>
<td></td>
</tr>
<tr>
<td>Diabetes mellitus, %</td>
<td>22.6</td>
<td>25.3</td>
<td>24.0</td>
<td>23.0</td>
<td></td>
</tr>
<tr>
<td>Percentage of patients with AF, %</td>
<td>82.5</td>
<td>81.3</td>
<td>81.7</td>
<td>82.1</td>
<td></td>
</tr>
<tr>
<td>Mean HAS-BLED</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

Unadjusted event rates

- Unadjusted ( crude) mortality rates after 1 year’s follow-up differed by country, ranging from <1 to 1.2 per 100 patient-years (average: 0.45 per 100 patient-year). Unadjusted rates of stroke/SE averaged 1.4 per 100 patient-years (range: 1.0 to 3.2 per 100 patient-years) and for major bleeding 1.1 per 100 patient-years (range: <1 to 2.8 per 100 patient-years).

Conclusions

- Variations in adjusted rates of stroke/SE and major bleeding remained after risk adjustment. These were not concordant with mortality rates for the respective countries. Some of the variation in major bleeding may be related to ascertainment of this endpoint.

REFERENCES