BACKGROUND

- Parenteral anticoagulation overwriting with vitamin K antagonists (VKAs) has been the cornerstone of venous thromboembolism (VTE) treatment. 1,2

- With the recent introduction of four direct oral anticoagulants (DOACs), apixaban, dabigatran, edoxaban, and rivaroxaban, physicians now have more choices of treatments for VTE. 3,4

- The Global Anticoagulation Registry in the Field—Venous Thromboembolism (GARFIELD-VTE) is a global, prospective, observational study of patients requiring treatment for acute VTE. 5

- GARFIELD-VTE observes real-world treatment practices and provides a contemporary snapshot of current VTE treatment among patients recruited in two consecutive cohorts between May 2014 and January 2017.

PURPOSE

- The purpose of this poster is to describe the acute anticoagulation (AC) therapy of patients with a confirmed diagnosis of VTE, who were treated with AC therapy only.

METHODS

- To be eligible for recruitment into GARFIELD-VTE, patients were required to be 18 years of age or older, with a confirmed diagnosis of acute VTE (either as a primary or secondary event) within 30 days of entry into the study, and being managed for VTE.

- The patients provided written informed consent. The study was approved by the individual ethics committees of each participating site. Data were captured by geographic region and special patient populations (active cancer, history of cancer, pregnancy, recent bled or anemia and renal impairment).

RESULTS

STUDY POPULATION

- Between May 2014 and January 2017, 11,842 patients from 41 sites in 28 countries were screened and 10,677 eligible patients with a confirmed diagnosis of VTE were included in the study population. Of these patients, a subset of 9111 patients who were treated with any of the following patterns of AC therapy alone within 20 days of diagnosis were included in the analyses: 1. parenteral therapy only, 2. parenteral therapy + VKA, 3. parenteral therapy + DOACs, 4. DOACs only and 5. VKA only. Parenteral therapy was defined as intravenous administration of AC therapy and/or with thrombolytics or other invasive procedures were excluded from this analysis.

- Differences in the patterns of care were analysed for patients stratified by region, site of VTE, year of enrolment, geographic region and special patient populations (active cancer, history of cancer, pregnancy, recent bled or anemia and renal impairment).

ANALYSES OF TREATMENT PATTERNS BY PATIENTS’ DEMOGRAPHICS, SITE OF VTE, DATE OF ENROLMENT, SPECIAL POPULATIONS

- Differences in therapeutic approach were observed by geographical region (Table 1).

- Of note, VKA alone was more frequently prescribed in countries outside Asia, Europe and North America (Table 1).

- AC treatment was similar in patients with deep-vein thrombosis (DVT) alone or pulmonary embolism with or without DVT; however, a greater proportion of patients with pulmonary embolism alone or without DVT received parenteral AC + DOACs, and a greater proportion of patients with DVT only received DOACs only (Table 2).

- Prescribing of DOACs increased in patients following a confirmed diagnosis of VTE (Figure 3): a small increase in DOACs prescribing was observed in patients recruited during 2016-2017 in 2014-2015 (Figure 4).

- As recommended by current guidelines, patients with active cancer were more likely to be treated with a parenteral AC alone followed by DOACs with or without heparins in-vitro and/or in-vivo. Although the percentage of patients on parental AC alone was highest in pregnant patients, there was a broad range of AC therapies in pregnancy not supported by any guidelines (Table 3).

CONCLUSIONS

- GARFIELD-VTE provides a global perspective on AC treatment patterns for VTE, which not only vary by population, site of VTE but also by geographic region.

- The geographic variations of AC treatment patterns may reflect cultural differences but also registration and remuneration of DOACs.

- The variation of AC treatment patterns over time is less than originally expected because in MOACs prescribing had already taken hold when GARFIELD-VTE started.

- Corresponding to guideline recommendations, the vast majority of cancer patients received parenteral ACs only but also DOACs were used in a considerable number of patients.

- Surprisingly, DOACs were also used in some pregnant patients even though they are currently not recommended in pregnant and breastfeeding women.

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REFERENCES


DECLARATION OF INTEREST

1. All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. The author(s) declare no potential conflict of interest.

2. All authors have participated in the study design, data analysis, and preparation of the manuscript.


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Table 1. Analysis of treatment patterns by patient demographics and region

<table>
<thead>
<tr>
<th>Region</th>
<th>Parenteral only</th>
<th>Parenteral + VKA</th>
<th>Parenteral + DOACs</th>
<th>Parenteral only + DOACs</th>
<th>VKA only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>27.6</td>
<td>54.7</td>
<td>18.7</td>
<td>2.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Asia</td>
<td>31.6</td>
<td>60.5</td>
<td>8.9</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Americas</td>
<td>21.4</td>
<td>49.3</td>
<td>33.3</td>
<td>7.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Table 2. Site of VTE

<table>
<thead>
<tr>
<th>Site of VTE</th>
<th>Parenteral only</th>
<th>Parenteral + VKA</th>
<th>Parenteral + DOACs</th>
<th>Parenteral only + DOACs</th>
<th>VKA only</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVT alone</td>
<td>80%</td>
<td>14%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>PE + DVT</td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 3. Treatment patterns in special populations

<table>
<thead>
<tr>
<th>Patient characteristic</th>
<th>Parenteral only</th>
<th>Parenteral + VKA</th>
<th>Parenteral + DOACs</th>
<th>Parenteral only + DOACs</th>
<th>VKA only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer</td>
<td>25.0</td>
<td>30.0</td>
<td>45.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>15.0</td>
<td>20.0</td>
<td>65.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Graphs and tables present the most common treatment patterns (over 25%).