An Evaluation of Oral Anticoagulation Initiation after Ischemic Stroke in Patients with Atrial fibrillation/Atrial Flutter at Hospital Discharge

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A knowledge gap exists for appropriate timing to prescribe OAC for patients with AF after ischemic stroke due to the potential risk of hemorrhagic conversion given the lack of consensus guidelines to direct therapy. Current recommendations vary between organizations and some observational data have revealed that early treatment might be effective and safe. Additionally, this study will identify an area in which pharmacy can play a larger accountability role to improve outcomes during transitions of care.

### Study Population

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Number of Patients (%)</th>
<th>n = 159</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>82 (51.6%)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>77.2 ± 10.6</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>125 (78.6%)</td>
<td></td>
</tr>
<tr>
<td>Patient Refused</td>
<td>14 (8.8%)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>11 (6.9%)</td>
<td></td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>4 (2.5%)</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>4 (2.5%)</td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>1 (0.6%)</td>
<td></td>
</tr>
<tr>
<td>Creatinine Clearance (n = 159)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 50 mL/min</td>
<td>99 (63.5%)</td>
<td></td>
</tr>
<tr>
<td>30 – 50 mL/min</td>
<td>41 (26.3%)</td>
<td></td>
</tr>
<tr>
<td>&lt; 30 mL/min</td>
<td>16 (10.3%)</td>
<td></td>
</tr>
<tr>
<td>CHA2DS2-VASc Score</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Oral Anticoagulation Prior To Admission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>93 (58.5%)</td>
<td></td>
</tr>
<tr>
<td>Apixaban 5 mg</td>
<td>26 (16.4%)</td>
<td></td>
</tr>
<tr>
<td>Warfarin</td>
<td>20 (12.6%)</td>
<td></td>
</tr>
<tr>
<td>Dabigatran</td>
<td>8 (5.0%)</td>
<td></td>
</tr>
<tr>
<td>Apixaban 2.5 mg</td>
<td>5 (3.1%)</td>
<td></td>
</tr>
<tr>
<td>Rivaroxaban 20 mg</td>
<td>5 (3.1%)</td>
<td></td>
</tr>
<tr>
<td>Rivaroxaban 15 mg</td>
<td>2 (1.3%)</td>
<td></td>
</tr>
</tbody>
</table>

### Distribution of Patients that Received tPA (n = 159)

- Cardioembolic: 39.6%
- Undetermined etiology: 2.4%
- Small vessel occlusion: 5.1%
- Large artery atherosclerosis: 60.4%
- No tPA: 13.8%
- Yes: 86.2%

### Distribution of Patients who are New to OAC at Discharge (n = 96)

- New: 56.3%
- Continued: 43.8%

### Distribution of OAC at Discharge (n = 96)

- Apixaban: 15
- Dabigatran: 11
- Rivaroxaban: 25
- Warfarin: 11

### Days after Discharge for Number of Patients Who are New to OAC (n = 42)

- 1 day: 8
- 2 days: 1
- 3 days: 4
- 4 days: 1
- 5 days: 2
- 6 days: 1
- 7 days: 3
- 9 days: 2
- 10 days: 1
- 11 days: 1
- 12 days: 1
- 13 days: 1
- 14 days: 1

### Discussion

- AHA/ACC continues to strongly recommend OAC for patients with atrial flutter or nonvalvular AF to reduce risk of recurrent stroke. With exceptions, the guidelines do not recommend the combination of antiplatelets and OAC for secondary prophylaxis of stroke.
- Of the 222 patients with a primary diagnosis of an ischemic stroke, 159 (72%) had an ischemic stroke secondary to AF or atrial flutter. There were 63 patients that did not fit the inclusion criteria, leaving a total of 159 patients in this retrospective study. Out of the 159 patients, 96 (60.4%) of the patients discharged successfully after their admission for an ischemic stroke.
- Of the included patients, 82 (51.6 %) were females and the average age was 77.2 years. The most common race was White or Caucasian (78.6%). The average creatinine clearance was estimated to be 62 mL/min. A total of 93 (58.5%) patients were not previously on OAC, and the most common OAC prior to admission was apixaban (16.4%) followed by warfarin (12.6%). The most common reason for not being on OAC was due to high bleeding risk, followed by non-compliance of OAC.
- Of the 159 patients with cardioembolic ischemic strokes, 11 (6.9%) patients received alteplase (tPA), and 11 (6.9%) received both tPA and thrombectomy for large vessel occlusion strokes.

### Conclusion

- The study results reflect previous literature for patients who were not prescribed OAC at/upon discharge. Antithrombotic safety is an area identified by the ASHP Pharmacy Work Group in which pharmacist may significantly impact through discharge counseling, transitions of care, and outpatient primary care follow-ups.
- Prescribing patterns at this large, tertiary medical center reflected most updated guideline-directed therapy along with close outpatient follow-up in the stroke clinic.
- In post ischemic stroke patients secondary to a cardioembolic etiology, the prescribing pattern was split between initiating OAC within 3 days or at the 7, 10, or 14 days after an ischemic stroke.

### References