Effect of Preinjury Use of Antiplatelet Agents in Patients with Isolated Traumatic Brain Injury

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Effect of Preinjury Use of Antiplatelet Agents in Patients with Isolated Traumatic Brain Injury

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Background
The incidence of traumatic brain injury (TBI) has remained constant over the past decade, but the use of antiplatelet (AP) agents has steadily increased, particularly in the elderly population. An increasing number of patients admitted with isolated TBI are on AP therapy at the time of trauma. Few studies have examined the effects of preinjury AP use on outcome following isolated TBI.

Methods
A retrospective review of our institutional trauma database was conducted from January 2007 to June 2008. All patients admitted with the diagnosis of isolated TBI were evaluated. Data on demographics, admission GCS, in-hospital GCS, ISS, head AIS, platelet count, PT, PTT, INR, use and type of antiplatelet or anticoagulation medication, progression of TBI, need for neurosurgical intervention, in-hospital mortality, discharge disposition, and readmission within 30 days were collected. A multiple regression analysis was performed.

Results
- 438 patients with isolated TBI, 48% taking AP or warfarin.
- No significant difference in mortality between AP & Neither groups.

<table>
<thead>
<tr>
<th>Clinical Characteristic</th>
<th>AP Only</th>
<th>Warfarin Only</th>
<th>AP &amp; Warfarin</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>76.1</td>
<td>77.1</td>
<td>78.3</td>
<td>56.1</td>
</tr>
<tr>
<td>Gender</td>
<td>Male 67</td>
<td>Male 29</td>
<td>Male 15</td>
<td>Male 140</td>
</tr>
<tr>
<td></td>
<td>Female 58</td>
<td>Female 27</td>
<td>Female 6</td>
<td>Female 87</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Characteristic</th>
<th>AP</th>
<th>Neither</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intubated on Admission</td>
<td>3</td>
<td>27</td>
<td>0.001</td>
</tr>
<tr>
<td>Progression on TBI</td>
<td>15</td>
<td>20</td>
<td>NS</td>
</tr>
<tr>
<td>Need for Surgical Intervention</td>
<td>27</td>
<td>31</td>
<td>NS</td>
</tr>
<tr>
<td>Mortality</td>
<td>9</td>
<td>26</td>
<td>NS</td>
</tr>
<tr>
<td>Platelet Transfusion</td>
<td>10</td>
<td>9</td>
<td>NS</td>
</tr>
<tr>
<td>Readmission within 30 days</td>
<td>25</td>
<td>16</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Conclusions
- A large number of patients with isolated TBI take AP agents or warfarin prior to injury.
- Patients with isolated TBI on AP agents or warfarin are older than TBI patients not taking AP or warfarin.
- Patients who received platelet transfusions have worse outcomes compared to those who did not.