THE OPTIMAL TIMING FOR RESUMPTION OF ANTIMACOAGULATION/ANTIPLATELET AFTER AN INTRACEREBRAL HEMORRHAGE: THE EVERLASTING QUESTION

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Background The number of patients presenting for intracerebral hemorrhage and taking anticoagulation/antiplatelets for other comorbidities is increasing. Till now, no consensus has been reached in finding the optimal timing of anticoagulation/antiplatelet (AC/AP) resumption that protects against thromboembolic events and prevents hemorrhage recurrence.

Objective To assess the best time for resumption AC/AP in patients presenting with intracerebral hemorrhage (ICH).

Methods This is a retrospective observational study including patients presenting with ICH while on AC/AP. Patients were identified by searching the prospectively maintained database of patients with ICH between 2015 and 2020. Patients were followed up for a full year to assess the effect of resumption and discontinuation of AC/AP on hemorrhagic and thrombotic complications.

Result In our study, the mean duration for AC/AP resumption was 19 days. During this time, 6 (8.1%) patients suffered from thrombotic events which was comparable to the literature. Moreover, none of the patients in our study developed any hemorrhagic events after AC/AP resumption.

Conclusion As a conclusion, our study showed that discontinuing AC/AP, especially AC or a combination of AC and AP, caused thrombotic events compared to AC/AP resumption which had no significant hemorrhagic complications regardless of the timing of resumption.

Disclosures K. El Naamani: None. R. Abbas: None. A. Sweid: None. S. Tjoumakaris: 2; C; Medtronic, Microvention. M. Gooch: 2; C; Stryker. N. Herial: None. D. Hasan: None. R. Rosenwasser: None. P. Jabbour: 2; C; Medtronic, Microvention, Balt, Cerus Endovascular.

SIZE AND VARIATION OF THE M1 SEGMENT: A SYSTEMATIC REVIEW

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Introduction Recent evidence suggests matching the size of the catheter to the vessel diameter promotes higher first-pass complete recanalization, particularly for occlusions in the M1 artery. As catheter sizes continually increase, they may become larger than M1 vessels. The aim of this systematic review was to determine the reported size and variation of the M1 artery internal diameter.

Methods A systematic literature search was performed on PubMed to identify studies published from January 2000 until November 2021. Studies measuring the M1 artery size on living human adult patients were included. Multiple cohorts within studies were treated separately. For each cohort, the patient population, reported mean artery size, and imaging modality were extracted. Statistical analysis included a descriptive analysis to calculate the mean and sample variation of the

Abstract E-277 Table 1 Reasons for blood thinners on admission

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Reason for Blood Thinners</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>Atrial Fibrillation</td>
</tr>
<tr>
<td>18</td>
<td>Coronary Artery Disease ± Mechanical Heart Valve</td>
</tr>
<tr>
<td>14</td>
<td>Hyperlipidemia ± Hypertension ± Diabetes</td>
</tr>
</tbody>
</table>

Table 1: Reasons for blood thinners on admission.

Abstract E-277 Table 2 Detailed medication categorization

<table>
<thead>
<tr>
<th>Blood Thinner Medication</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warfarin</td>
<td>25</td>
</tr>
<tr>
<td>Apixaban</td>
<td>8</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>12</td>
</tr>
<tr>
<td>Aspirin</td>
<td>10</td>
</tr>
<tr>
<td>Plavix</td>
<td>2</td>
</tr>
<tr>
<td>Aspirin + Plavix</td>
<td>1</td>
</tr>
<tr>
<td>Aspirin + Warfarin</td>
<td>9</td>
</tr>
<tr>
<td>Aspirin + Rivaroxaban</td>
<td>4</td>
</tr>
<tr>
<td>Aspirin + Apixaban</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 2: Detailed medication categorization.
distribution of means, and a one-way ANOVA comparison of means per imaging modality using Tukey’s honest significant test for subgroup comparison.

**Results**

A total of 20 articles were included with 37 different cohorts measuring 3,560 M1 vessels from a variety of patient populations, including healthy patients (n=12 studies), patients with large vessel occlusions (n=6 studies), or patients with specific neurovascular pathologies (n=2 studies). Distribution of the means was not normal (Anderson-Darling test for normality, p<0.005). A histogram showed a bimodal distribution with 2 peaks. The peak with highest number of cohorts occurred at 2.4mm (equivalent to 0.094" or 7.2F), while the other peak was at 3.0mm (equivalent to 0.118" or 9.0F). The lowest mean was reported as 2.1mm (equivalent to 0.083" or 6.3F) with an interquartile range of 1.9 to 2.3mm, and the highest at 3.42mm (0.135" or 10.2F) with a range of 2.98 to 3.68mm. Subgroup comparison of imaging modalities was not significant (p>0.05) for MRA (μ=2.68 ± 0.41mm from 23 cohorts), CTA (μ=2.56 ± 0.40mm from 4 cohorts), DSA (μ=2.47 ± 0.48mm from 6 cohorts), and combination of MRA & CTA (μ=2.75 ± 0.21mm from 2 cohorts). Only MRI T2 Blood (μ=3.16± 0.11mm from 2 cohorts) reported a larger mean compared to all other imaging modalities (p<0.05). Since only the means of cohorts were analyzed, individual arteries were reported smaller than the smallest mean, and larger than the largest mean.

**Conclusions**

There is a wide variation of M1 sizes and imaging modalities reported in the literature from healthy and stroke patients. As catheter sizes increase beyond 6F, their outer diameters may become oversized to the M1 internal diameter.

**Disclosures**

M. Mirza: 5; C; Cerenovus.
R. McCarthy: 5; C; Cerenovus.
M. Gilvarry: 5; C; Cerenovus.

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**ULTRASOUND GUIDED DIRECT ACCESS TO EMBOLIZE LINGUAL ARTERY PSEUDOANEURYSM FOR OROPHARYNGEAL BLEEDING**

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**Introduction**

Tumors of the head and neck can be challenging to manage and have a predisposition to hemorrhage in many cases. Transfemoral and transradial arterial embolization of head and neck tumors can be effective at mitigating bleeding risk. However, direct percutaneous access to the cervical vasculature may be necessary if proximal vessels are ligated or occluded. We performed a retrospective review of cases requiring embolization of external carotid artery (ECA) branch vessels and identified one case requiring percutaneous embolization for visualization and embolization.

**Methods**

A retrospective review of all cases of embolization of ECA branches for tumor-related hemorrhage from January 1st, 2020 to January 1st 2022 at our institution was performed.

**Results**

We identified one out of sixty-two embolization procedures of the extracranial circulation that required direct percutaneous ECA access due to hemorrhage related to a lingual artery pseudoaneurysm on CTA (Figure 1). Ultrasound guided access to the left lingual artery was achieved with a 22-spinal needle, a percutaneous angiogram was performed, and n-BCA 3:1 glue was utilized to occlude the proximal lingual artery occluding the associated pseudoaneurysm (Figure 2). The patient was asymptomatic at discharge with no further hemorrhage and suffered no complications. This case reflects our

**Figure 1:** Helical CT-Angiogram imagines demonstrate a proximal left lingual pseudoaneurysm measuring 6 x 5 mm.

**Abstract E-279 Figure 1** Helical CT-angiogram imagines demonstrate a proximal left lingual pseudo-aneurysm measuring 6 X 5 mm

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**Abstract E-279 Figure 2** Left: oblique PA digital subtraction angiogram of the left lingual artery performed by direct percutaneous access demonstrating a lingual artery pseudoaneurysm. Right: Oblique PA radiograph demonstrating an n-BCA liquid embolic cast within the pseudoaneurysm consistent with successful embolization.