THROMBOLYSIS WITH ALTEPLASE 3 to 4.5 HOURS AFTER ACUTE ISCHEMIC STROKE

ECASS Investigators

Background

Alteplase (tPA) is used to breakdown blood clots in ischemic strokes.

3hr

3 - 4.5 hr

What is the safety and efficacy of tPA given 3 - 4.5 hrs post stroke?

Methods

Double blinded Multi-site RCT

1:1 tPA to Placebo randomization

Inclusion

18 to 80 years old

Acute ischemic stroke

Able to receive the study drug within 3-4.5 hours after symptom onset

Exclusion

Intracranial hemorrhage

Severe stroke (NIHSS score >25 or on imaging techniques)

Results

<table>
<thead>
<tr>
<th></th>
<th>tPA (418)</th>
<th>Placebo (403)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic Intracranial Hemorrhage</td>
<td>2.4%*</td>
<td>0.3%</td>
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<tr>
<td>Mortality (at 90 days, no significant difference)</td>
<td>7.7%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Disability (at 90 days, modified Rankin - 1)</td>
<td>45.2%*</td>
<td>52.4%</td>
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* = statistically significantly different

Take Home

While Alteplase treatment given at 3-4.5 hours after the onset of acute stroke symptoms INCREASES the incidence of symptomatic intracranial hemorrhage, it can DECREASE disability in a select population of patients without changing mortality.

REFERENCES:

This infographic was created by Amy Chung and edited by Alvin Chin

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