TXA: NOT JUST A ONE TRICK PONY

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DISCLOSURES

I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity

I do intend to discuss an unapproved/investigative use of a commercial product in my presentation
OBJECTIVES

• Discuss alternative uses of TXA
• Identify the clinical settings most suitable for off label TXA usage
• Assemble a treatment plan to utilize in practice
TRANEXAMIC ACID (TXA)
WHERE ELSE CAN WE USE TXA?

- GI bleeds
- Postpartum hemorrhage
- Post-tPA bleeds

- Epistaxis
- Hyphemas
- Dental Bleeding
Tranexamic acid for upper gastrointestinal bleeding (Review)

Bennett C, Klingenberg SL, Langholz E, Gluud LL

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>RR</th>
<th>CI</th>
<th>Significance</th>
<th>Quality (GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>0.6</td>
<td>0.42-0.87</td>
<td>Yes</td>
<td>Moderate</td>
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<tr>
<td>Rebleeding</td>
<td>0.72</td>
<td>0.50-1.03</td>
<td>No</td>
<td>Low</td>
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<tr>
<td>Thromboembolic events</td>
<td>1.86</td>
<td>0.66-5.24</td>
<td>No</td>
<td>Moderate</td>
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</table>
APPROACHES OF DELIVERING TXA TO GI BLEEDS

TOPICAL TXA AS A NOVEL TREATMENT FOR BLEEDING PEPTIC ULCERS: A RCT

• 120 kids (1 mo – 15 yo) randomized to receive either topical TXA (500mg via EGD) or standard care of injectable epinephrine in 4 sites surrounding the ulcer
  • No difference in LOS, emergent surgery, blood transfusions.
  • Control group required more repeat endoscopies

COMPARISON OF IV TXA W/WO TOPICAL TXA VS PLACEBO IN URGENT ENDOSCOPY RATE FOR ACUTE UGIB: A DOUBLE BLIND RCT

• 410 adult patients randomized to groups A, B or C.
• No significant difference in mortality, rebleeding, transfusion, intervention at endoscopy
• Higher proportion of group C (placebo) required urgent endoscopy (<6hr)
Haemorrhage alleviation with tranexamic acid - Intestinal system
THE WOMAN TRIAL
WORLD MATERNAL ANTIFIBRINOLYTIC TRIAL
EPISTAXIS
TXA vs Epi/Lido

- 124 Patients with uncomplicated anterior bleeds
- 500mg/5ml TXA vs Epi(1:100,000) Lido (2%)

<table>
<thead>
<tr>
<th></th>
<th>Lido/Epi</th>
<th>TXA</th>
<th>Difference</th>
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<tbody>
<tr>
<td>Hemostasis &lt; 10 min</td>
<td>29%</td>
<td>73%</td>
<td>44%</td>
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<tr>
<td>LOS &lt; 2hr</td>
<td>13%</td>
<td>97%</td>
<td>84%</td>
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<tr>
<td>24hr recurrence</td>
<td>10%</td>
<td>5%</td>
<td>-5%</td>
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TRAUMATIC HYPOPHEMA

- 2013 Cochrane Review

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Antifibrinolytics</th>
<th>Control</th>
<th>Odds Ratio M-H, Fixed, 95% CI</th>
<th>Odds Ratio M-H, Fixed, 95% CI</th>
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<tbody>
<tr>
<td></td>
<td>Events</td>
<td>Total</td>
<td>Events</td>
<td>Total</td>
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<tr>
<td>Rahmani 1999</td>
<td>8</td>
<td>80</td>
<td>21</td>
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<tr>
<td>Sukumaran 1988</td>
<td>2</td>
<td>17</td>
<td>6</td>
<td>18</td>
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<td>Vangsted 1983</td>
<td>0</td>
<td>59</td>
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<td>53</td>
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<tr>
<td>Varnek 1980</td>
<td>2</td>
<td>102</td>
<td>12</td>
<td>130</td>
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<td>Welsh 1983</td>
<td>1</td>
<td>19</td>
<td>6</td>
<td>20</td>
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<tr>
<td>Total (95% CI)</td>
<td>13</td>
<td>277</td>
<td>45</td>
<td>301</td>
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</table>

Heterogeneity: $\chi^2 = 0.67$, df = 3 ($P = 0.88$); $I^2 = 0$
Test for overall effect: $Z = 4.07$ ($P < 0.0001$)
DENTAL BLEEDS

- Most data we have for TXA
- Mostly in dental / operative literature
- 2017 SR/Meta-Analysis
  - 5 RCTs
  - RR: 0.13 (0.05-0.36) p=0.01
  - TXA protective effect in A/C patients

- Recent 2018 RCT
  - Tooth extractions on warfarin
  - Time to hemostasis significantly shorter (p<0.001)
Efficacy of tranexamic acid in haemoptysis: A randomized, controlled pilot study

Balaji Laxminarayanshetty Bellam, Deba Prasad Dhibar, Vikas Suri, Navneet Sharma, Subhash Chander Varma, Samir Malhotra, Ashish Bhalla

Treatment of Intracerebral Hemorrhage with Tranexamic Acid After Thrombolysis with Tissue Plasminogen Activator

K. F. French, Jacob White, R. E. Hoesch

Nebulized Tranexamic Acid as a Noninvasive Therapy for Cancer-Related Hemoptysis

Hankerson Matthew J., Raffetto Brian, Mallon William K., Shoenberger Jan M.
QUESTIONS?

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REFERENCES