



Gastrointestinal bleeding - Does tranexamic acid halt it or not?

CLINICAL QUESTION

Does tranexamic acid reduce mortality or other clinically significant outcomes in gastrointestinal bleeds?

BOTTOM LINE

In acute gastrointestinal bleeds, tranexamic acid does not reduce mortality, transfusions, surgical interventions, or intensive care stay compared to placebo and should not be routinely used.

EVIDENCE

- High quality, international, randomized controlled trial (RCT) of 12009 patients with significant acute (signs of shock or likely to require transfusion, endoscopy or surgery) gastrointestinal bleed (90% upper).¹ Patients (mean age 58 years, 64% males) randomized to 1-gram intravenous tranexamic acid (TXA), followed by 3g infusion over 24-hours or placebo. Outcomes not statistically different at 28 days:
 - All-cause mortality: 9.5% versus 9.2% placebo
 - Death from gastrointestinal bleeding: 4.2% versus 4.4% placebo
 - Transfused units of whole blood or red cells: 2.8 versus 2.9 placebo
 - Proportion requiring surgical intervention 87.6% versus 87.5% placebo
 - Days in intensive care: 1.8 days versus 2.0 placebo
 - Thromboembolic events: 1.4% versus 1.2% placebo.
 - Limitations: Other care provided was not explicitly stated and likely differed between countries.

- Systematic review done prior to above RCT (8 studies, 1701 patients)² found 5-day mortality benefit with TXA but is limited by:
 - Small number of patients (total ~15% of above RCT),
 - Benefit disappeared when patients lost to follow up were conservatively analyzed.

CONTEXT

- Peptic ulcer disease, gastritis, esophageal varices and Mallory-weiss tears are the most common etiologies of upper gastrointestinal bleeds.^{3,4}
- Upper gastrointestinal bleed mortality has been decreasing since late 20th century; is currently ~2%.³
- Proton pump inhibitors given prior to endoscopy may decrease the need for endoscopic treatments but have not been shown to decrease mortality.⁵
- Restrictive transfusion strategies (example transfusing hemoglobin at 70-80 g/L versus 90-100 g/L) does not negatively affect mortality or other outcomes.⁶
- Performing gastroscopies for upper gastrointestinal bleeds within 24 hours has similar outcomes as performing them within 6 hours.⁷

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