



How to Slow the Flow III: Tranexamic acid for heavy menstrual bleeding

CLINICAL QUESTION

In premenopausal heavy menstrual bleeding due to benign etiology, does tranexamic acid (TXA) improve patient outcomes?

BOTTOM LINE

TXA is more effective than placebo, progestins, or NSAIDs. Menstrual blood loss is reduced in ~40% of women with TXA compared to ~10% with placebo, with 5-10 fewer sanitary items used/cycle and similar adverse events. However, more women benefit from a levonorgestrel intrauterine device (IUD) than TXA (~60% versus 30%). Effects on bleeding duration and flooding are inconsistent.

EVIDENCE

- Statistically significant unless noted.
- One systematic review,¹ 13 randomized controlled trials (RCTs). After 2-6 cycles:
 - Versus placebo (4 RCTs, 16-304 patients):¹⁻⁵
 - Proportion with clinically detectable blood loss improvement: 39% versus 11% placebo.¹
 - Mean blood loss 53mL/cycle lower with TXA (baseline 153-268mL).¹

- Example: Mean blood loss reduced 40% (70ml) versus 8% (13ml) (placebo).⁵
 - Sanitary items used per cycle: 20-27 versus 25-36 placebo.^{2,3}
 - Bleeding duration,^{2,3} "large stains"^{4,5} (not defined): No difference.
 - Quality of life: Not clinically different.^{4,5}
 - Adverse effects: No difference.¹⁻⁵
 - Versus progestins (6 RCTs, 46-128 patients):^{1,6-9}
 - Proportion with clinically detectable blood loss improvement: 71% versus 46% progestins.¹
 - Mean blood loss: Inconsistent; largest RCTs^{6,7} show no difference.
 - Sanitary items: No difference.⁸
 - Bleeding duration: Reduced 1-2 days versus 0.3-2 days progestin.^{6,7}
 - Flooding/leakage reported "better": 83% versus 45% progestin.⁸
 - Adverse effects (examples headaches, spotting): 21% versus 32% progestin.¹
 - Versus levonorgestrel intrauterine device (IUD) (1 RCT, 42 patients):^{1,9}
 - Proportion with clinically detectable blood loss improvement: 29% versus 61% IUD.
 - Quality of life, adverse effects: No difference.
 - Versus mefenamic acid (1 RCT, 49 patients):^{1,10}
 - Proportion with clinically detectable blood loss improvement: 87% versus 61% mefenamic acid.¹
 - Mean blood loss reduced from 164 to 75ml versus 186 to 148ml mefenamic acid.¹⁰
 - Sanitary items, bleeding duration, adverse events: No difference.¹⁰
- Other meta-analysis¹¹ found similar.
- Limitations: Many trials small and short, variable blood loss measurement methods, inconsistent fibroid inclusion, outcomes inconsistent, not all randomized patients included in analysis.

CONTEXT

- Although no increase in thromboembolic events in large bleeding/trauma studies, TXA should be avoided with thromboembolic history.¹²⁻¹⁵
- TXA costs ~\$14/cycle.¹⁶

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