



How to Slow the Flow II: Levonorgestrel intrauterine systems for heavy menstrual bleeding

CLINICAL QUESTION

In premenopausal heavy menstrual bleeding due to benign etiology, do levonorgestrel intrauterine systems (IUD) improve patient outcomes?

BOTTOM LINE

Compared to other treatments (example oral contraceptives), blood loss with an IUD is reduced ~80% versus 25%, more women with an IUD are satisfied (75% versus 60%), and more remain on treatment at 2 years (64% versus 38%).

EVIDENCE

- Focusing on most comprehensive systematic review¹, 9 randomized controlled trials (RCTs) comparing 52-mg levonorgestrel intrauterine system (IUD) to other medical treatments. Results statistically different unless indicated.
 - Percent reduction in blood loss: ~82% versus 26% control (oral contraceptives/medroxyprogesterone acetate).
 - Patient satisfaction at 1 year: 75% versus 60% control (oral contraceptives, norethisterone, tranexamic acid/norethisterone).
 - Treatment success: 82% versus 43% (control).
 - Quality of life: Usually no difference.

- Dysmenorrhea: not reported.
- Breast tenderness: 19% versus 6% (control).
- Ovarian cysts: 4.4% versus 1.3% (control).
- Withdrawal due to side effects: No difference.
- 1 RCT in women on anticoagulants: Reduced bleeding scores (255 versus 156; lower=better), reduced bleeding days per cycle (2 versus 7), and improved hemoglobin (120 g/L versus 100g/L) versus no treatment at 6 months.²
- Pragmatic RCT³, 571 women, IUD versus choice of tranexamic acid/NSAID/oral contraceptive/progesterone only pill. At 2 years:
 - Menorrhagia quality of life scale (0-100, lower=worse, baseline~40): 81 versus 67 (control).
 - Still on assigned treatment: 64% versus 38% (control).
 - At 5 years:
 - Proportion on assigned treatment: 47% versus 15% (control).
 - No difference in menorrhagia quality of life scores (both >80)³ or surgical intervention rates (~20%).⁴
- Other systematic reviews found similar.⁵⁻⁸
- Limitations:
 - No studies examining other levonorgestrel doses.
 - Most RCTs excluded fibroids.
 - Evidence usually rated low to moderate certainty (very low for satisfaction).

CONTEXT

- IUD likely at least as good as ablation on bleeding, patient satisfaction and quality of life.¹
- Indirect comparisons suggest proportion of “responders” (women with <80 ml menstrual blood loss after 3 months): IUD 88%, progestin only pills 64%, oral contraceptives 63%, tranexamic acid 48%, placebo 18%.⁵
- Blood loss volume does not correlate to patient experience.⁹

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