

Intrauterine devices for menorrhagia

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Clinical question

Do levonorgestrel-releasing intrauterine systems (LNG-IUS) improve outcomes in patients with premenopausal heavy menstrual bleeding with benign cause?

Bottom line

Comparing LNG-IUS with other therapies (eg, oral contraceptives [OCs]), blood loss is reduced (by 82% vs 26%), more patients are satisfied (75% vs 60%), and more continue with treatment at 2 years (64% vs 38%).

Evidence

Results were statistically different unless indicated.

- A comprehensive systematic review included 9 RCTs comparing LNG-IUS (52 mg) with other treatments.¹ Percentages presented here were calculated by the authors (J.P. and A.J.L.):
 - Blood loss was reduced by about 82% with LNG-IUS versus 26% with control treatments (OCs or medroxyprogesterone acetate). Patient satisfaction at 1 year was 75% versus 60% with control treatments (OCs, norethisterone, or tranexamic acid with norethisterone). Treatment success (based on bleeding score and no other treatment needed) was 82% versus 43% in control groups. Breast tenderness (19% vs 6%) and ovarian cysts (4% vs 1%) were more common in LNG-IUS groups. Quality of life (QOL) usually did not differ and withdrawal rates owing to side effects did not differ. Rates of dysmenorrhea were not reported.
 - In 1 RCT of women taking anticoagulants, the LNG-IUS group had lower mean bleeding scores at 6 months than the control group (156 vs 255; lower scores better), lower mean bleeding days per cycle (2 vs 7), and better hemoglobin levels (120 g/L vs 100 g/L).²
- A pragmatic RCT (N=571) compared an LNG-IUS group with a control group taking their choice of tranexamic acid, nonsteroidal anti-inflammatory drugs, OCs, or progesterone-only pills.³ At 2 years, there was a higher mean score on a menorrhagia QOL scale (0 to 100; lower scores worse, baseline 40) in the LNG-IUS group (81 vs 67 control) and higher proportions of participants remained on LNG-IUS (64% vs 38% control). At 5 years, there were no differences in menorrhagia QOL scores (both >80) or surgical intervention rates (about 20%); more continued with LNG-IUS than with other treatments (47% vs 15%).
- Other systematic reviews found similar results.^{4,5}
- Limitations: No studies examined other levonorgestrel doses. Most RCTs excluded patients with fibroids.

Evidence was generally rated as low (bleeding) to moderate certainty (QOL), but very low for satisfaction.¹

Context

- With respect to bleeding, QOL, and patient satisfaction, LNG-IUS are likely at least as good as ablation.¹
- Indirect comparisons suggest proportions of patients who respond to various treatments (<80 mL of blood loss per menstrual cycle after 3 months) include the following: LNG-IUS 88%, OCs 63%, progestin-only OC pills 64%, tranexamic acid 48%, and placebo 18%.⁴
- Blood-loss volume does not correlate with patient experience.⁶

Implementation

Heavy menstrual bleeding (measured objectively) is estimated to occur in 9% to 14% of women annually.¹ It is generally diagnosed based on patients' perceptions and becomes problematic when it affects QOL or causes conditions such as anemia.¹ Intrauterine systems provide effective contraception and are approved for up to 5 years of use; it may be reasonable to use them for up to 6 years for contraception, but efficacy for heavy menstrual bleeding has not been studied beyond 5 years.⁷ Benefits of lower-dose LNG-IUS for heavy bleeding are unknown.¹

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Competing interests
None declared

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