

Abnormal bleeding in your female patient? Consider a progestin IUD

Abnormal bleeding is common in women of childbearing age. For some, insertion of a levonorgestrel-releasing IUD—easily done in a family practice setting—may be all the treatment they need.

Erin Hendriks, MD;
Susan E. Rubin, MD,
MPH; Linda Prine, MD
Wayne State
University Family Medicine,
Rochester Hills, Mich
(Dr. Hendriks); Albert
Einstein College of
Medicine, New York, NY
(Dr. Rubin); The Institute
for Family Health,
New York (Dr. Prine)

emhendriks@yahoo.com

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PRACTICE RECOMMENDATIONS

➤ *Recommend the 52 mg levonorgestrel-releasing intrauterine device (LNG-IUD) as a first-line treatment for heavy menstrual bleeding. (A)*

➤ *Advise patients with dysmenorrhea that the 52 mg LNG-IUD is an effective nonsurgical treatment. (A)*

Strength of recommendation (SOR)

- (A)** Good-quality patient-oriented evidence
- (B)** Inconsistent or limited-quality patient-oriented evidence
- (C)** Consensus, usual practice, opinion, disease-oriented evidence, case series

CASE ▶ Jane K, a 40-year-old multiparous woman, is seeking treatment for heavy menstrual bleeding and cramping, both of which have troubled her for 4 years. Another physician had given her oral contraceptive pills (OCPs) to decrease the pain and bleeding, she reports, but she has difficulty remembering to take a pill every day.

On physical exam, you note an enlarged uterus (approximately 16-week size). A pregnancy test is negative, her thyroid-stimulating hormone level is normal, and her hemoglobin is 9 g/dL. Transvaginal ultrasound reveals multiple fibroids.

What can you offer her?

At some point in their reproductive years, 10% to 15% of women experience heavy menstrual bleeding (HMB), or menorrhagia.^{1,2} In fact, HMB and dysmenorrhea are among the most common reasons for office visits and missed work among women in this age group.^{3,4} In addition to having a negative impact on quality of life, HMB can cause severe anemia.⁵

All too often, the suggested solution is a hysterectomy. In fact, 90% of the more than 600,000 hysterectomies performed annually in the United States are for benign disease.^{6,7} Yet many women with HMB want nonsurgical treatments, and some seek to preserve their fertility. A progestin IUD can often fulfill both of these desires.

An IUD containing 52 mg levonorgestrel (Mirena) has US Food and Drug Administration (FDA) approval both for use as a contraceptive and for the treatment of HMB in women who want intrauterine contraception.⁸ Recent studies have confirmed its efficacy in treating a wide variety of conditions associated with menorrhagia and dysmenorrhea. In 2013, a smaller, lower dose (13.5 mg) levonorgestrel-releasing IUD



➤ The 52 mg levonorgestrel-releasing IUD has been shown to be effective in treating multiple conditions associated with menorrhagia and dysmenorrhea.

(Skyla) received FDA approval as a contraceptive.⁹ But because this device has been neither tested nor approved for other applications, the following review applies only to Mirena—referred to throughout this article as the LNG-IUD.

A proven (and often superior) treatment for menorrhagia

Leiomyomas, or fibroids—the most common benign tumor of the female genital tract—are a frequent cause of menorrhagia.¹⁰ OCPs are often used for the treatment of symptomatic fibroids for women who wish to avoid surgery. When compared with low-dose OCPs for the treatment of menorrhagia secondary to fibroids, however, the LNG-IUD resulted in a significantly greater reduction in blood loss.¹¹

While fibroid size does not appear to decrease significantly after insertion of the device, a systematic review found that menstrual bleeding lessens and hemoglobin levels improve in women with symptomatic fibroids.^{12,13} The LNG-IUD has also been shown to improve symptoms in women with dysmenorrhea secondary to fibroids.¹⁴

■ **Hemostatic disorders.** Anticoagulants are vital for women with hemostatic disorders such as Von Willebrand disease, immune thrombocytopenia, or a clotting factor deficiency (See “Is a novel anticoagulant right for your patient?” on page 22), but their use may cause or worsen menorrhagia. In such cases, the LNG-IUD appears to be an effective treatment.

In a retrospective case review of 28 women with menorrhagia secondary to various hemostatic disorders, 68% experienced improvement after insertion of the IUD.¹⁵ Another study compared women on anticoagulant therapy for cardiac valve disease (N=40) with and without the LNG-IUD. Compared with the control group, those with the IUD were found to have significant increases in hemoglobin levels 3 months after insertion.¹⁶

■ **Obesity-related uterine bleeding.** Obese women are at higher risk for excessive uterine bleeding, the result of increased conversion of plasma androstenedione to estrogen in adipose tissue. In one study evalu-

ating the use of the LNG-IUD in this patient population, 75% of participants experienced a reduction in bleeding.¹⁷

■ **Idiopathic HMB.** The IUD is as good as, or better than, other treatments for idiopathic menorrhagia. It results in a significantly higher reduction in both blood loss and days out of work than OCPs.¹ The device also reduces blood loss more effectively than oral medroxyprogesterone,¹⁸ another common approach to idiopathic HMB; and, compared with hysterectomy, it results in similar patient satisfaction—but lower costs and complication rates.¹⁹

In a randomized controlled trial that compared the LNG-IUD with tranexamic acid, mefenamic acid, combined estrogen-progesterone, or progesterone alone over a 2-year period, scores on a menorrhagia symptom scale were significantly higher (indicating greater improvement) in the LNG-IUD group.²⁰

Medical management of endometrial proliferation

Endometrial hyperplasia, often found in women with abnormal uterine bleeding patterns and recurrent anovulatory cycles,²¹ is sometimes treated with supplemental progesterone. According to the Centers for Disease Control and Prevention (CDC)’s US Medical Eligibility Criteria for Contraceptive Use, the LNG-IUD can be used without restriction in this patient population, as well.²²

A systematic review of 9 studies of women with endometrial hyperplasia without atypia found the LNG-IUD to be both safe and effective. In 7 of the 9 studies, 100% of participants experienced disease regression; regression rates for the other 2 studies were 90% and 67%.²³ The only caveat: Both endometrial atypia and endometrial cancer should be excluded prior to IUD insertion.

■ **Adenomyosis** is caused by the presence of ectopic endometrial glands and stroma within the myometrium and frequently results in pelvic pain, menorrhagia, and dysmenorrhea.¹⁰ Hysterectomy is often regarded as the mainstay of treatment. But medical management with the LNG-IUD is also an option, as it has demonstrated similar improvements to hysterectomy both in hemoglobin levels

and quality of life.²⁴ Three years after insertion of the LNG-IUD to treat moderate or severe adenomyosis-associated dysmenorrhea, one study found, women reported significant improvement in their symptoms—and 73% were satisfied with their treatment.²⁵ The LNG-IUD also appears to decrease uterine volume, although this effect may begin to decrease 2 years after insertion.²⁶

■ **Endometriosis**, another common cause of dysmenorrhea and chronic pelvic pain,²⁷ can also be treated with the LNG-IUD. The local progestin administration to pelvic structures that the device provides has been found to significantly decrease both endometrial proliferation and monthly blood flow.²⁸ Additional studies of the LNG-IUD as a treatment for endometriosis and pelvic pain are ongoing and encouraging. After surgery for endometriosis, a Cochrane review found, women who had the LNG-IUD inserted had a lower rate of recurrence of dysmenorrhea than those without it.²⁹

Helping women through perimenopause Compared with oral or intramuscular progesterone therapy, the LNG-IUD has been found to be superior for the treatment of perimenopausal symptoms.³⁰ Two years after insertion, one study found, perimenopausal women had a 95% reduction in blood loss and a 63% decrease in dysmenorrhea.³¹ The LNG-IUD also provides reliable endometrial protection for women receiving estrogen therapy³² and for those who are taking adjuvant tamoxifen because of a history of breast cancer.^{33,34}

IUD insertion is a safe office procedure

The Society of Teachers of Family Medicine cites IUD insertion in its core list of routine procedures to be included in family medicine residency programs.³⁵ The risk associated with insertion is small—uterine perforation occurs in about 2.6/1000 insertions³⁶—and there is a small and transient increase in the risk of IUD-related infection in the first few weeks to months after insertion. IUD insertion does not increase the overall risk of pelvic inflammatory disease in women at low risk for sexually transmitted infections.^{37,38}

Who is not a candidate?

While IUDs are safe for most women, there are several absolute contraindications to the LNG-IUD:

- current breast, cervical, or endometrial cancer
- current pelvic inflammatory disease, cervicitis, chlamydia, or gonorrhea
- having just had a septic abortion.³⁸

Teach patients about the benefits and adverse effects

For women who are potential candidates for the LNG-IUD, education is vital. Evidence suggests that satisfaction levels are very high, provided patients receive adequate counseling about the benefits and adverse effects. Risks (of uterine perforation and infection) are small, as noted earlier.³⁹

■ **Contraceptive efficacy**, of course, is a major benefit, and has been well documented: The LNG-IUD has an estimated failure rate of just 0.2%.⁴⁰ Unlike user-dependent methods such as OCPs, the patch, and the ring, the IUD has a perfect-use failure rate that is the same as the typical use rate. Thus, it is an excellent choice for women who want to preserve their fertility yet avoid an unintended pregnancy. For women approaching menopause—a time when estrogen may be contraindicated—the LNG-IUD can safely protect women against unwanted pregnancy.

■ **Lower cost, less invasive.** The ability to treat HMB and dysmenorrhea with an IUD inserted in a family practice setting, without referrals to specialists for additional invasive treatments, increases cost savings.¹⁹ In addition, the LNG-IUD is less invasive and generally more acceptable to women than hysterectomy, endometrial ablation, uterine artery embolization, and myomectomy.^{18,41} It leads to a greater reduction in menstrual bleeding than OCPs, oral progestins, tranexamic acid, and oral mefenamic acid.⁴¹ And, unlike some progestational agents, there is no evidence that the LNG-IUD has any adverse effects on bone density, vaginal tone, or urinary continence.⁴²

■ **Adverse effects.** Vaginal spotting is the most commonly reported adverse effect associated with the LNG-IUD, particularly in the

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first 3 to 6 months postinsertion.⁴² The other common adverse effect is increased cramping, which some women experience in the first few months after insertion. Rarely women may experience ovarian cysts from unruptured follicles, which will regress on their own. Another potential problem is expulsion, which is more common in women who are using the device to control heavy bleeding (8.9%-13.6%).⁴² After the device is in place for several years, many women experience amenorrhea—a side effect that patients who have suffered from HMB and dysmenorrhea may consider a benefit.

CASE ► After counseling regarding her treatment options, Ms. K decides on the LNG-IUD, which her family physician inserts. At 3-month follow-up, she reports significantly less bleeding and decreased perimenstrual discomfort. If her workup had revealed adenomyosis or a hemostatic disorder, the LNG-IUD would still have been a first-line option. **JFP**

CORRESPONDENCE

Erin Hendriks, MD, Wayne State University Family Medicine, 1135 West University Drive, Suite 250, Rochester Hills, MI 48307; emhhendriks@yahoo.com

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