



## FIRST OF 2 PARTS

# Let's increase our use of IUDs and improve contraceptive effectiveness in this country

↻ The unintended pregnancy rate is too high in the United States, and the use of long-acting reversible contraceptives is too low. Expanding the patient population to which we prescribe intrauterine devices could help many women avoid unintended pregnancy.

Most studies indicate that the three available long-acting reversible contraceptives (LARCs)—

- copper intrauterine device (IUD)
- levonorgestrel-releasing intrauterine system (LNG-IUS)
- etonogestrel-releasing implant (Nexplanon)

—are the most effective reversible contraceptive methods. The injection

of depot medroxyprogesterone acetate (DMPA) is also highly effective. In a large cohort study, by Winner and colleagues, of 7,486 women who were prescribed a reversible contraceptive, the contraceptive failure rate among women using a contraceptive pill, patch, or vaginal ring was 4.55 per 100 woman-years.<sup>1</sup> For women using an IUD or etonogestrel implant, the contraceptive failure rate was 0.27 per 100 woman-years, and in women using DMPA, the contraceptive failure rate was 0.22. After adjusting for differences in age and education levels, the investigators found that **women using the pill, patch, or vaginal ring were 21.8 times more likely to become pregnant than women using an IUD or etonogestrel implant.**

As Drs. Rowen and Creinin note in their “Update on Contraception” on page 29 of this issue of OBG MANAGEMENT, approximately 49% of all pregnancies are reported to be unintended in the United States. A major contributing factor to this high rate of unintended pregnancy is that LARC methods are used at a low rate in the United States, compared with other developed countries.

The results of the study by Winner and colleagues, and other studies, support the notion that we could improve the effectiveness of our contraceptive interventions, and reduce the unplanned pregnancy rate, if we used LARCs more often. In this editorial, I focus on the expanding clinical indications for the use of the two available IUDs, the copper IUD (FIGURE 1) and the LNG-IUS (FIGURE 2), and propose, *if you were asked to prescribe the most effective reversible contraceptive method in the three presented cases, what would you recommend?*

In next month's editorial, I will focus on the expanding indications for the use of the etonogestrel-releasing implant and DMPA.

**A common misperception is that the IUD should not be used routinely in nulliparous women**

### CASE 1

A 30-year-old G0 woman was prescribed a contraceptive estrogen-progestin pill. Following a 14-hour international airplane flight she developed a lower extremity deep venous thrombosis (DVT). A thrombophilia

## Instant Poll



What interesting cases or novel applications of the IUD have you discovered in your clinical practice that you would like to share with the readers of OBG MANAGEMENT?

Tell us—at  
**robert.barbieri@qhc.com.**  
Please include your name and city and state.



**FIGURE 1** ParaGard®



Owned by Teva Pharmaceuticals Industries, Ltd.

**FIGURE 2** Mirena®



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evaluation revealed that she carried a factor V Leiden allele. She has just completed a 6-month course of warfarin and is requesting that you place an LNG-IUS.

Would you recommend an IUD in this nulliparous woman?

**Evidence for IUD use in nulliparous women.** Although IUDs are widely used in many developed countries, they are only used in about 6% of contracepting women in the United States.<sup>2</sup> Many factors contribute to their limited use in this country, including beliefs about patient characteristics (nulliparity, adolescent age) that are relative contraindications to use. Yet recent evidence strongly supports expanding the number of patients eligible for IUDs. For instance, until relatively recently, the FDA labeling for IUDs recommended limiting their use to women who had at least one child. In 2005, however, the FDA changed its guidance and approved the copper IUD for use in nulliparous women. I believe the same guidance should be used for the LNG-IUS.

A theoretical concern is that an

IUD could cause tubal infection and infertility, which could be a more devastating adverse effect of infection among nulliparous women than among women who have had one or more children. Among women at average risk for pelvic infection, there is a slight increase in the risk of pelvic infection in the first 20 days after insertion. After this time, the risk of pelvic infection among IUD users is the same as that among nonusers.<sup>3</sup> Based on findings from a large observational study, investigators have reported that chlamydial infection is the most common cause of tubal infection and infertility, not the IUD.<sup>4</sup>

Based on this study, **my conclusion is that IUDs do not cause tubal damage and infertility**, rather undetected and untreated chlamydial infections are the primary cause of tubal damage and infertility.<sup>4</sup>

#### **CASE 1** Conclusion

Given this patient's history of DVT while taking an estrogen-progestin contraceptive, she is no longer eligible to use the estrogen-progestin pill, patch, or vaginal ring. I placed an LNG-IUS in this woman and she has

been very pleased with this method of contraception.

**OCs, the patch, and the ring fail more often among adolescents than among women aged 21 and older**

#### **CASE 2**

A 16-year-old G1P0 female adolescent had a therapeutic abortion 4 weeks ago. She reports that she was faithfully taking an estrogen-progestin contraceptive pill when she became pregnant. She wonders why her contraception "did not work."

Would you place an IUD in this adolescent?

**Arguments for IUD use in adolescents.** Among women younger than age 21, contraceptive failure rates are higher for OCs, the patch, and the vaginal ring than they are for LARC methods.<sup>1</sup> Adolescents contribute disproportionately to the high number of unintended pregnancies in the United States. Clinically, it is not surprising that a 16-year-old who was prescribed an estrogen-progestin contraceptive became pregnant.

A committee opinion given by the American Congress of Obstetricians and Gynecologists concluded that the use of an IUD by a sexually active adolescent does not increase her risk of pelvic infection or infertility.<sup>5</sup> Sexually active adolescents are at high risk for developing a chlamydial infection, and diligence in screening and treating chlamydial infections is important in this high-risk group regardless of their contraceptive choice.<sup>6</sup>

Compared with women aged 21 and older, adolescents may have more IUD expulsions or removals due to troubling bleeding or pain.<sup>7,8</sup> As noted by Drs. Braaten and Goldberg in their article,

## Contraindications to IUD placement

*These clinical situations preclude any IUD insertion, most experts agree:*

- Active pelvic infection
- Known or suspected pregnancy
- Uterine bleeding that has not been evaluated or diagnosed
- Severe distortion of the uterus, including severe fibroid disease or certain Müllerian anomalies

*Contraindications to the copper IUD:*

- Wilson's disease
- Copper allergy

*Contraindication to the LNG-IUS:*

- Current breast cancer

“Malpositioned IUDs: When you should intervene (and when you should not),” on page 38 of this issue, for a woman with an IUD and pelvic pain, performing a physical examination, testing for sexually transmitted disease, and using ultrasonography to identify the IUD's position may help you develop an effective plan for resolving the patient's symptoms.

### CASE 2 Conclusion

The patient agreed that an IUD was an excellent contraceptive for her. She has not become pregnant since the IUD was placed approximately 18 months ago.

### Copper IUDs can serve a dual purpose

#### CASE 3

A 21-year-old G1P1 woman calls your office at 8 AM on Monday morning and reports that on Saturday night she had sexual relations and the condom broke. She thinks she is at midcycle and asks for your advice about her emergency contraception options.

Would you place a copper IUD in this woman?

**Evidence for IUDs as emergency contraception.** In the United States, available emergency contraceptives include the copper IUD, ulipristal, and levonorgestrel and estrogen-progestin contraceptives. Many authorities believe that, **around the time of ovulation, the copper IUD is the most effective emergency contraceptive.**<sup>9</sup> The copper IUD can be placed up to 5 days after unprotected intercourse. For this young woman who has used condoms as her contraception, placement of a copper IUD would be both an effective emergency contraceptive and provide up to 10 years of contraception.

### CASE 3 Conclusion

The woman was counseled about emergency contraceptive options, and she selected the copper IUD. She expressed that she had expected to receive a pill and that she did not realize IUD placement was an option. She came to the office later in the day for an expedited single-visit that included pregnancy and chlamydia testing and copper IUD placement.

### As ObGyns, let's lead the way

Increasing the use of LARC contraceptive methods is likely to result in a significant improvement in the reproductive health of women. Internists, pediatricians, and family medicine specialists have other priorities and are not likely to lead the effort of increasing LARC use in the United States. That task will be borne by the few, the proud, the ObGyns. 📧



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*Dr. Barbieri reports no financial relationships relevant to this article.*

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## Correction

**“Markey commends J&J's wisdom in ceasing to market vaginal mesh,” July 2012, Web posting**

In the online news item published on [obgmanagement.com](http://obgmanagement.com) July 1, 2012, “Markey commends J&J's wisdom in ceasing to market vaginal mesh,” the article failed to specify which Gynecare products were ceasing to be marketed. The article was corrected and reposted on July 12, 2012. The Editors would like to thank several readers for pointing out the inaccuracy and apologize for any confusion created as result of the initial posting.

—The Editors