

# IUDs Are Making a Comeback, Expert Says

BY DOUG BRUNK

EXPERT ANALYSIS FROM THE ANNUAL MEETING OF THE INFECTIOUS DISEASES SOCIETY FOR OBSTETRICS AND GYNECOLOGY

SANTA FE, N.M. – IUDs, once considered an unsafe method of birth control, appear to be making a comeback.

Recent data from the Centers for Disease Control and Prevention suggest that about 5.5% of women aged 15-44 years use IUDs for contraception, which is equivalent to those who choose natural family planning as their primary form of birth control (Vital Health Stat. 2010;23[29]:1-44). That's up significantly from 1995, when fewer than 1% women used IUDs.

"IUDs that we currently have available in the United States are safe," Dr. Sarah W. Prager said at the meeting. "They're highly efficacious and they're still vastly underused in the United States. It would behoove us, for our patients' sake, to get beyond some of our biases based on our past negative associations."

In her opinion, the downfall of

IUDs emerged soon after the Dalkon Shield was introduced in 1971. Insertion of that device was associated with septic abortion and death, and it caused a fivefold increased risk of pelvic inflammatory disease (PID), compared with other IUDs from that time period, said Dr. Prager of the University of Washington, Seattle. Hypothesized reasons for the problems included the braided polyfilament strings and the fact that a smaller Dalkon Shield was marketed specifically to nulliparous women.

"There is no question that nulliparous women are less likely to be married and therefore more likely to have more partners, which puts them at an increased risk for a sexually transmitted infection," Dr. Prager said. "Another hypothesis is that the increased surface area of the shield made it more able to drag bacteria from the vagina into the uterus. Also, it was not very effective, with a 2% failure rate per year."

Of the estimated 6 million pregnancies annually in the United States, almost half are unintended, she said. Of those unintended pregnancies, slightly

more than half occur in women who are using some form of contraception. "The pill is still the most commonly used method of reversible contraception, followed by condoms, followed by [intrauterine contraception]."

Family planning clinicians are increasingly recommending IUDs, she added, because the two devices that are currently available in the United States – the copper T 380A (Teva Women's Health Inc.'s ParaGard) and the LNG IUS (levonorgestrel intrauterine system, marketed as Mirena by Bayer Healthcare Pharmaceuticals) – are just as effective in preventing pregnancy as is female sterilization. "So effectively, you have reversible sterilization with these products, which is amazing for women who want more long-term prevention of pregnancy," Dr. Prager said, noting the products' 0.5% failure rate over 5 years.

She credits the pendulum shift in part to mechanical improvements in contemporary IUDs,

compared with those from years gone by. For example, plastic IUDs from yesteryear "were less effective in preventing pregnancy. They would depend on surface area for their function and they would cause sterile inflammation based on mass effect."

ParaGard, on the other hand,

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is made of copper, which decreases the motility and viability of sperm. "It also disrupts oocyte division and sterilization," she said. "Secondarily, it inhibits implantation." It is approved for 10 years of use.

Mirena inhibits fertilization primarily by thickening cervical mucus. It also inhibits sperm motility and function, suppresses the endometrium, causes a weak foreign body reaction, and inhibits ovulation

cycles in about 10% of women. It is approved for 5 years of use.

Another factor in the widening acceptance of IUDs, Dr. Prager said, is that there were biases in many studies linking infection and infertility risk to the use of devices that were being used in the 1970s, when about 10% of women used IUDs. "Inappropriate comparison groups were sometimes used," she said. "Women using contraceptives that lower the risk of PIDs' is probably not an appropriate comparison group. Systematic overdiagnosis of PID in IUD users is also a possibility in a lot of these studies, because [that] was a concern after the early 1970s. Another reason is the inability to control for a number of confounders, such as number of sexual partners." ■

**Disclosures:** Dr. Prager disclosed that she is an Implanon speaker/trainer for Schering-Plough. She has also received salary support from a grant partially subsidized by Ortho-McNeil Pharmaceuticals.

## All Teens With PCOS Need an OGTT, Regardless of Weight

BY MIRIAM E. TUCKER

FROM THE ANNUAL SCIENTIFIC SESSIONS OF THE AMERICAN DIABETES ASSOCIATION

ORLANDO – More than 10% of non-obese adolescent girls with polycystic ovary syndrome were found to have impaired glucose tolerance in a study of 70 girls who had been referred to a specialty clinic for menstrual irregularity.

The finding suggests that all girls and women with polycystic ovary syndrome (PCOS) – not just those who are overweight or obese – should be evaluated with an oral glucose tolerance test (OGTT), said Dr. Clare A. Flannery of the Yale Multidisciplinary Adolescent PCOS Program and the department of endocrinology-internal medicine at Yale University, New Haven, Conn.

"Without an OGTT, the presence of impaired glucose metabolism is underestimated in lean adolescents with PCOS since their other parameters of insulin resistance may be in normal range. There is a need for a standardized OGTT for every adolescent with PCOS, regardless of weight," she said.

The study was conducted at the Yale PCOS clinic, where patients referred for menstrual irregularity are seen by an endocrinologist, a gynecologist, and a nutritionist. All patients also receive a transabdominal pelvic ultrasound, androgen panel, fasting lipid testing, and a 75-g OGTT. A group of 80 patients who

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**Major Finding:** Impaired glucose tolerance was found in eight of the NIH-defined PCOS adolescent patients (14.5%) and 10 of the AES-defined group (16%). When the second group was divided into obese and nonobese subgroups, IGT was present in 16% of both groups.

**Data Source:** A study of 70 adolescent girls referred to a specialty clinic for menstrual irregularity.

**Disclosures:** Dr. Flannery stated that she had no financial disclosures.

were enrolled in an ongoing cohort study had a mean age of 15.6 years and mean body mass index (BMI) of 31.4 kg/m<sup>2</sup>, but with a broad range of BMI from 19 to 46 kg/m<sup>2</sup>. Two-thirds of patients were white. Three-fourths of the patients had acne, nearly all had hirsutism, and more than half (57%) had acanthosis nigricans, signaling insulin resistance.

Because there are no established criteria for diagnosing PCOS in adolescence, two of three professional guidelines for diagnosing PCOS in adults were used for the study: The 1990 National Institutes of Health criteria (Blackwell Scientific Publications, 1992:377-84), which includes irregular menses and clinical or biochemical evidence of high androgens with the exclusion of other disorders, and the 2006 Androgen Excess Society (AES) criteria, which allow ultrasound findings of PCOS as a substitute for ir-

regular menses (J. Clin. Endocrinol. Metab. 2006;91:4237-45).

(The 2003 Rotterdam criteria [Human Reproduction 2004; 19:41-7] were not used because the definition is less strict and could include adolescents with hypothalamic amenorrhea, she noted.)

Ten adolescents were excluded from analysis because they were either already on metformin or had missing OGTT data. Of the remaining 70, 55 (79%) met the NIH criteria for PCOS diagnosis and 64 (91%) met the AES criteria. One patient who met both criteria was found to have impaired fasting glucose, and another who met both definitions had type 2 diabetes. Impaired glucose tolerance (IGT) was found in eight of the NIH-defined PCOS patients (14.5%) and 10 of the AES-defined group (16%).

Among the 64 who met the AES PCOS criteria, 40 were obese (BMI of 95th percentile by age or greater). Mean BMI was 36 kg/m<sup>2</sup> for the obese group and 24 kg/m<sup>2</sup> for the nonobese. IGT was present in 16% of both groups. Two-hour serum glucose values were higher in the obese group (117 vs. 107 mg/dL in the nonobese) but that difference, which did not meet statistical significance, was primarily because of the one outlier in the obese group who met the

criteria for type 2 diabetes, Dr. Flannery noted.

"The nonobese girls were just as likely to have impaired glucose tolerance as their obese counterparts. If we had not indiscriminately applied the OGTT to all our patients, the abnormal glucose metabolism of the nonobese girls may have been missed," she commented.

In contrast to the OGTT finding, other metabolic characteristics did appear to be driven by obesity rather than PCOS. Fasting glucose was greater – although still within normal range – among the obese patients (86 vs. 82 mg/dL), and there was a trend toward increased insulin resistance among those in the obese group, as measured by the homeostatic model assessment. Lipid abnormalities and other parameters of insulin resistance also worsened as weight increased, with both differences in C-reactive protein and high density lipid protein reaching statistical significance.

Dr. Flannery recommended that physicians use the AES guidelines for performing an OGTT in all girls and women with PCOS, regardless of age or BMI, noting that the most recent guidelines from the American Diabetes Association recommend use of OGTT only in overweight adolescents with additional risk factors. "If we had applied the ADA guidelines, we would have missed IGT in many of our adolescents," she said. ■