Infertility Treatment Less Effective in Obese

VITALS

Major Finding: Obese and overweight women undergoing infertility treatment were less likely to become pregnant and more likely to have a stillbirth or premature birth.

Data Source: A retrospective analysis involving 610 women.

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BY PATRICE WENDLING

ATLANTA — Increasing weight among overweight and obese women undergoing infertility treatment dramatically decreases their chance of pregnancy and live birth, and increases the odds of stillbirth or premature birth, according to a retrospective analysis.

Young women under the age of 30 years—an age group that traditionally has the best success rates from infertility treatment—were at greatest risk of being obese and thus having poor outcomes.

"It's quite distressing that among the obese women [seeking infertility treatment], the youngest women represented the largest group—19.6%," lead author Dr. Barbara Luke said at the annual meeting of the American Society for Reproductive Medicine.

Among 610 women, 41% of normal-weight women became pregnant as a result of assisted reproductive technology (ART) treatment, compared with 40.8% of underweight women, 39.6% of overweight women, and 36.5% of obese women.

Compared with normal-weight women, the odds of a live birth were reduced 14% for overweight women and 22% for obese women, Dr. Luke reported. The difference was significant for overweight and obese women, even after adjustment for maternal age, race and ethnicity, number of embryos transferred, and infertility diagnosis.

Stillbirth was twice as likely for underweight women as normal-weight women, and more than three times as likely for obese women. The odds of stillbirth, however, were significant only for obese women (odds ratio, 2.50) compared with underweight (OR, 1.93); normal-weight (OR, 1.00); and overweight (OR, 1.48) women.

This confirms earlier data that with increasing obesity there is an increased chance of stillbirth, regardless of fertility status, Dr. Luke said.

Increasing weight upped the odds of delivering early, even after the analysis was also adjusted for plurality.

Compared with normal-weight women, the risk of a very early preterm birth, before 29 weeks, was cut by almost one-half in underweight women (OR, 0.52) and by 6% in overweight women (OR, 0.94), but significantly increased by almost 60% in women who were obese (OR, 1.59).

The odds of a preterm birth before 32 weeks were also significantly increased among obese women, while both overweight and obese women had significantly higher odds of delivering before 37 weeks, said Dr. Luke of the obstetrics, gynecology, and reproductive biology department at Michigan State University in East Lansing.

The odds of a term birth at 37 weeks or more were significantly reduced by 13% for overweight women (OR, 0.87) and by 25% for obese women (OR, 0.75), compared with normal-weight (OR, 1.0) and underweight women (OR, 1.1).

"It was a very consistent and dose-dependent response," Dr. Luke said.

The mechanism driving the poor outcomes may be metabolic, adding that "obesity is a state of inflammation, not a state of health. A 30-pound weight loss would move you to another category and improve outcomes," she said.

Patients were categorized by body mass index, with 110 women being underweight (BMI less than 18.5 kg/m^2); 131, normal weight (18.5-24.9 kg/m^2); 161, overweight (25-29.9 kg/m^2); and 208, obese (30 kg/m^2 or more).

Obesity was recorded in 19.6% of women aged less than 30 years, 17% aged 30-34 years, 17.5% aged 35-39 years, 17.9% aged 40-44 years, and 14.1 aged 45 years and older. ■