

Infertility History Linked to Adverse Outcomes

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NEW ORLEANS — Couples who conceive after a history of infertility are more likely to have children with health and behavioral problems and to face pregnancy and labor complications, compared with their fertile counterparts, according to preliminary results of a large U.S. study presented at the annual meeting of the American Society for Reproductive Medicine.

The results are independent of maternal age and multiple gestation, and apply whether the couples conceived naturally or with fertility treatment, said principal investigator Mary Croughan, Ph.D., of the University of California, San Francisco.

"Infertility itself appears to play a more important role than the treatment," Dr. Croughan said. She stressed that despite the increased risks seen in the infertile population, the overall incidence of adverse outcomes in her study was still low. "The

vast majority of the children and pregnancies were healthy, but there were certain conditions that were found much more frequently in the infertile group," she said in an interview.

The results are based on an analysis of 1,296 mothers and their children (average age 6 years) who were conceived after a period of infertility. Roughly one-third of the women had conceived naturally, while the remainder had conceived with some form of fertility treatment (18% medica-

tion only, 24% intrauterine insemination, 21% in vitro fertilization/intracytoplasmic sperm injection). They were compared with a control group of 1,153 fertile mothers and their children. The research included roughly 1,000 maternal interviews and a review of more than 19,000 medical records.

After adjusting for maternal age and multiple gestation, the investigators found that children conceived by infertile couples had a threefold increase in "severe" adverse outcomes such as cerebral palsy, mental retardation, autism, seizure disorder, or cancer by 6 years of age, compared with controls. These children also had a 40% increase in "moderate" adverse outcomes, such as attention-deficit hyperactivity disorder, attention-deficit disorder, learning disabilities, behavior disorders, developmental delay, serious vision disorders, or serious hearing disorders, said Dr. Croughan.

Additionally, compared with controls, pregnancies, labor, and deliveries following a period of infertility were more likely to have complications such as preterm labor, eclampsia, chorioamnionitis, and cesarean section. Children born to couples with a history of infertility were also 20% more likely to be born prematurely or with low birth weight, and had twice the incidence of intrauterine growth restriction. They were 30% more likely to be admitted to a neonatal intensive care unit and to stay in the hospital for more than 3 days.

In looking at childhood outcomes only, Dr. Croughan said, "It appears that infertility itself imparts a risk to both pregnancy and outcomes." Although she has not yet examined the association of various infertility diagnoses and treatments with outcomes, her study did find a significantly increased rate of heart disease (relative risk 2.5) and diabetes (relative risk 3.8) in mothers with a history of infertility, "which would have increased their risks for pregnancy complications and might have contributed to the reasons for their infertility," she said.

The study highlights an important association between infertility and adverse obstetric and childhood outcomes, but the link should not be misinterpreted as causal or universal, cautioned Dr. David Adamson, president-elect of ASRM and director of Fertility Physicians of Northern California in Palo Alto.

"It's important not to draw the conclusion that these risks are definitely higher for all infertile people," he said in an interview. "We need to look at this issue prospectively, with larger numbers, and examine subgroups of the infertile population to determine whether specific conditions might increase risk."

Dr. Croughan said the next step for her study is to examine the association of infertility diagnoses and treatments with outcomes, with a long-term goal of developing clinical guidelines. "We'd like to be able to say to someone with a specific infertility diagnosis, these are your potential risks of adverse pregnancy and childhood outcomes, and if you add fertility treatment this is how that risk changes. There may also be women who could be counseled in advance to decrease their risk," she said. ■

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