Progestin treatment for polycystic ovarian syndrome may reduce pregnancy chances

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(Medical Xpress) -- The hormone progestin, often given as a first step in infertility treatment for polycystic ovary syndrome (PCOS), appears to decrease the odds of conception and of giving birth, according to a study by a National Institutes of Health research network.

PCOS is a disorder in which the ovaries, and sometimes the adrenal glands, produce excess amounts of hormones known as androgens. Women with PCOS typically have menstrual irregularities and may have difficulty getting pregnant. Infertility treatment for the condition typically involves ovulation induction — drug treatment to stimulate the release of an egg. Before ovulation induction, physicians may administer a single course of progestin. Progestin leads to a thickening in the lining of the uterus. Without continuous administration of progestin to maintain the thickening, the uterine lining is sloughed off, and bleeding begins. The idea behind the treatment is to simulate the bleeding that occurs at the beginning of the monthly menstrual cycle.

The researchers found, however, that women who skipped the progestin treatment before receiving fertility drugs were four times more likely to conceive than were women given progestin. Ultimately, 20 percent of the women who did not receive progestin gave birth, compared with about 5 percent of the women who received progestin.

"Our results indicate that a treatment with progestin before ovulation induction is counterproductive in helping women with PCOS achieve pregnancy," said Esther Eisenberg, M.D., of the Reproductive Sciences

Branch of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), one of the study authors.

The study was conducted by Michael P. Diamond, M.D., of Wayne State University in Detroit, Richard S. Legro, M.D., of the Penn State College of Medicine in Hershey, and researchers at 16 institutions in the NICHD Cooperative Reproductive Medicine Network (RMN).

The study was published online in *Obstetrics and Gynecology*.

The study was an analysis of data from a 2007 RMN study comparing two fertility treatments for women with PCOS: the standard drug therapy clomiphene, which stimulates ovulation, and the diabetes treatment drug metformin.

Women with PCOS frequently experience insulin resistance, a condition in which the body fails to use insulin properly. Studies have shown that drugs such as metformin, which make the body more sensitive to insulin, can increase ovulation rates in women with PCOS. However, the 2007 study found that women taking metformin alone were less likely to get pregnant and give birth than those receiving either clomiphene or a combination of clomiphene and metformin.

The current analysis of the data from the 2007 study compared the effectiveness of ovulation induction combined with advance progestin treatment to that of ovulation induction alone.

The analysis revealed that when women had a spontaneous menstrual cycle, 72 percent ovulated again the following month. About 5 percent of these women were able to conceive.

However, many of the women pursuing fertility treatment failed to ovulate in a given month. Women who received a dose of progestin,

followed by ovulation induction, ovulated in 30 percent of cases. Nearly 7 percent of these women conceived.

Women who did not receive progestin ovulated 27 percent of the time, but nearly 28 percent of these women were able to get pregnant.

The study authors noted that simulating the menstrual cycle is also used in infertility treatments for other kinds of infertility.

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