

Clomiphene is superior to metformin in improving the live birth rate of women with polycystic ovary syndrome

March 5, 2007—Extended-release metformin alone, or in combination with clomiphene citrate, does not improve the rate of live births in women with polycystic ovary syndrome according to a report in the February 8, 2007 issue of the *New England Journal of Medicine*.

Polycystic ovary syndrome is a common cause of female fertility striking 7-8% of women. As targeting hyperinsulinemia with insulin sensitizers has been shown to increase fertility in women with polycystic ovary syndrome, Dr. Richard S. Legro and colleagues undertook a study to determine if the insulin sensitizer, metformin, was superior to clomiphene in increasing the live birth rate of women with polycystic ovary syndrome.

A total of 626 infertile women with polycystic ovary syndrome, defined by oligomenorrhea and hyperandrogenemia, were randomized into 3 groups: clomiphene citrate plus placebo, extended-release metformin plus placebo, or a combination of clomiphene citrate and extended-release metformin for up to 30 weeks. Treatment was discontinued if pregnancy occurred.

The live birth rate of clomiphene citrate alone (22.5%) or in combination with extended-release metformin (26.8%) was superior to extended-release metformin alone (7.2%) in improving the live birth rate. Treatment with clomiphene compared to extended-release metformin led to a slight increase in multiple births (6% vs. 0%).

The rate of ovulation was higher in the combination group, but this did not translate to an increase in live birth rates and the authors note “the results of our study underscore the limitations of the use of ovulation as a surrogate marker for live birth in fertility trials.”