

Modulating the antiestrogenic effects of clomiphene citrate by ethinyl estradiol in patients undergoing intrauterine insemination

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Abstract

Infertility with an incidence of about 10-15% is a social problem that sometimes threatens the continuity of the family life. Clomiphen Citrate (C.C.) is one of the most commonly used drugs in the treatment of infertility. The purpose of this study was to compare the pregnancy and abortion rates after IUI in two groups of patients who received clomiphen citrate alone or C.C. in combination with ethinyl E2 to stimulate ovulation in patients undergoing IUI. This was a randomized clinical trial study performed at the Infertility Center of Mashad Medical Science University. The subjects were 159 women, aged 20-30 years with infertility background of 1-10 years who were randomly assigned to two groups. The first group received C.C. plus ethinyl E2 and the other group C.C. alone. The number and diameter of the follicles, endometrial thickness, and pregnancy and abortion rates were evaluated by transvaginal ultrasonography and analyzed by chi-square and T-test. There was a significant difference in endometrial thickness between the two treatment groups (7.88 mm in group I vs. 7.02 mm in group II, $p=0.001$). There were no significant differences between pregnancy and abortion rates in the two groups. Pregnancy rate was 18.6% in group I vs. 14.5% in group II and first trimester abortion rate was in group I, 21% vs in group II, 25%. Ethinyl E2 can modulate the deleterious effects of C.C. on endometrial thickness, which could not contribute to higher pregnancy rates and lower spontaneous abortion rates.

Key words: Clomiphene citrate, Ethinyl Estradiol, Intra Uterine Insemination (IUI), Pregnancy rate, and Abortion rate.

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