# Πώς να προγραμματίσεις κύκλους με GnRH ανταγωνιστές

In the long gonadotropin releasing hormone (GnRH) agonist protocol, ovarian stimulation is initiated once pituitary desensitization has been achieved. Cycle starts can be postponed for a few days just by continuing the agonist. The initiation of stimulation in GnRH antagonist protocols however relies on the occurrence of menstruation. These protocols therefore do not allow for programming of IVF cycles unless there is pre-treatment of some sort.

There are several ways with which cycle scheduling can be done: (1) a flexible start of the stimulation because results do not seem to change whether ovarian stimulation is started on day 2 or day 3 of the cycle; (2) delaying or advancing human chorionic gonadotropin administration, because moving it 1 day ahead or postponing one extra day does not seem to influence cycle outcome; (3) estradiol (E2) pre-treatment in the late luteal phase to avoid follicle stimulating hormone (FSH) rise and follicle recruitment and (4) pre-treatment with oral contraceptive (OC) pills.

A variety of OC have been used for pre-treatment in ART cycles. The dose of ethinyl E2 in OC can vary from 15 to 50 μg. The type of progestogen used also varies and includes norethindrone, norgestimate, desogestrel or levonorgestrel. The publications so far have been limited to the use of monophasic OC. The use of triphasic OC in GnRH antagonist cycles has not been evaluated. The pill-free interval also varies with a period of 2-5 days being reported in the literature.[8] A 5-day wash-out period after OC was shown to be optimal prior to initiation of gonadotropins.

Some studies with the use of OC pre-treatment in antagonist IVF cycles showed a relatively small (−5% rate difference [95% CI: −10% to −1%]) but statistically significant reduction of ongoing pregnancy likelihood when a pill-free interval of 2-5 days is used before starting gonadotropin stimulation.

The authors could not find a definite reason for this observed reduction in PR with OC pre-treatment. They speculate that the progestin component of the OC could exert a negative impact on endometrial receptivity in the subsequent cycle. Another possibility is that low endogenous LH levels after OC treatment might impair oocyte competence or endometrial receptivity when ovarian stimulation is performed with recombinant FSH void of LH activity in GnRH antagonist cycles, as was the case in all 6 RCTs included in their meta-analysis. It is possible that the addition of LH or use of human menopausal gonadotropin would alter the outcome of OC pretreated GnRH antagonist cycles. They also raised the possibility that use of other progestin/ethinyl E2 combinations may not show this

Cédrin-Durnerin et al assessed the effects of estrogen pre-treatment in GnRH antagonist protocol reduction in PR.The authors concluded that estrogen pre-treatment is associated with the requirement of higher FSH doses and longer duration of stimulation without any significant increase in the number of retrieved oocytes. However, estrogen does not affect cycle outcome and therefore might be used in clinical practice for programming IVF retrievals during working days.

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