HIGH PROGESTERONE LEVELS IN HIGH OVARIAN RESPONSE DO NOT AFFECT CLINICAL OUTCOMES

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It has been suggested that very high levels of estradiol (E2) may have a detrimental effect on endometrial receptivity and the outcome of in vitro fertilization (IVF) cycle and that increases in E2 values on the day of hCG administration are associated with increased progesterone (P4) levels. The aim of our study was to determine the influence of high progesterone levels on clinical outcomes in high ovarian response.

We performed a retrospective analysis of 1800 cycles comparing high (P4>1.5 ng/ml) or low (P4<1.5 ng/ml) progesterone levels in patients undergoing controlled stimulation classified as high responders (E2>3000 pg/ml). Statistical analysis (Chi-squared test was carried out with SPSS 19.0 and statistical significance established under 0.05.

We did not find significant differences in any of the analyzed parameters: number of retrieved oocytes (17.2±0.8 vs. 17.3±0.4, p=0.785), number of transferred embryos (1.81±0.08 vs 1.85±0.02, p=0.224), pregnancy rate (59.9% vs 54.6%, p=0.183), implantation rate (41.2% vs 39.7%, p=0.203) and miscarriage rate (22.6% vs 28.6%, p=0.198) for high and low progesterone levels respectively in case of high ovarian response.

The physiological impact on the quality of the cycle as a result of an elevated estradiol remains the subject of intense debate, and this controversy is greater when progesterone levels are considered. Our data suggest that, in high responder patients with estradiol levels over 3000 pg/ml, progesterone levels do not affect IVF results as we obtained similar clinical outcomes when considering high or low progesterone levels.