603: Dual triggering with urinary and recombinant gonadotropin-releasing hormone agonist in fresh autologous IVF/ICSI cycles – Is it a matter of timinig?

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Objective
Triggering the final oocyte maturation is one of the most critical steps during in vitro fertilization (IVF) treatment. To reduce the incidence of ovarian hyperstimulation, the dual-trigger system with gonadotropin-releasing hormone agonist (GnRH-a) in addition to a reduced dose of human chorionic gonadotropin (hCG) was invented. However, the debate of the necessity and timing of dual trigger remains controversially discussed. This study was set up to investigate the influence of dual trigger timing within fresh autologous cycles.
Design
Retrospective study
Materials and Methods
Data from 649 cycles of 493 patients were collected from November 2016 to December 2018. Only patients < 40 years and normal responders (AMH > 1.2 ng/ml; FSH < 12 mIU/ml) were included. 311 patients received 5000 IU of urinary hCG (Pregnyl; Organon) in combination with 0.2 mg GnRH-a (Decapeptyl; Ferring Pharmaceuticals) while 182 patients received 6500 IU of recombinant hCG (Ovitrelle; Merck Serrono) in combination with 0.2 mg GnRH-a (Decapeptyl; Ferring Pharmaceuticals). The timing of GnRH-a administration was either 2 or 6 hours before hCG administration, according to the number of immature oocytes in previous IVF cycles. Differences in pregnancy rates and fetal heartbeat rates were evaluated.
Results
A positive beta-hCG was achieved in 29.66% (urinary hCG + GnRH-a) and 31.16% (recombinant hCG + GnRH-a), respectively. Looking at the different time points of GnRH-a administration urinary hCG + GnRH-a (2h) revealed a pregnancy rate of 30.96% while administration of urinary hCG + GnRH-a (6h) revealed a pregnancy rate of 23.94%. In addition, recombinant hCG + GnRH-a (2h) showed a pregnancy rate of 33.06% while the administration of GnRH-a (6h) revealed a pregnancy rate of 27.03%. All comparisons did not show statistically significant differences between groups. Additionally, the number of fetal heart beats was equal between groups.
Conclusions
In conclusion the results of this study show that the timing of GnRH-a administration leads to equal pregnancy and fetal heartbeat rates. Hence it is tempting to speculate that the timing of GnRH-a administration is not a critical factor in triggering final oocyte maturation, which point to more flexibility in reproductive medicine treatment.
Support
None
Disclosure
None