Dual trigger of oocyte maturation with gonadotropin-releasing hormone agonist (GnRHa) and human chorionic gonadotropin (hCG) in normal responder patients undergoing IVF/ICSI cycles: a retrospective analysis.

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STUDY QUESTION

Does dual trigger significantly improves the laboratory and clinical outcome for normal responders in GnRH-antagonist cycles?

SUMMARY ANSWER

Similar clinical pregnancy rate is achieved when compared dual trigger for oocyte maturation to standard (hCGr) triggering. The number of COCs and metaphase II retrieved were reduced with this approach of triggering.

WHAT IS KNOWN ALREADY

Recent data from retrospective studies suggest that the use of gonadotropin-releasing hormone agonist (GnRHa) and human chorionic gonadotropin (hCG) for oocyte maturation is promising and potentially improves the clinical outcome for normal responders in GnRH-antagonist cycles.

STUDY DESIGN, SIZE, DURATION

This single center retrospective case study, including 220 normal responder patients undergoing IVF/ICSI in antagonist cycles, was undertaken during the period January 2013-December 2014.

PARTICIPANTS/MATERIALS, SETTING, METHODS

Exclusion criteria were: Poor (<4 COCs) or high (>20 COCs) response to ovarian stimulation; >39 y.o; AMH <1.1 ng/ml; BMI >30 kg/m2. Dual trigger (6500 IU hCGr + triptorelin 0,2 mg) was employed in 103 patients (January 2014–December 2014) and the results compared to 113 control patients using 6500 IU hCGr-only for triggering (January 2013-December 2013).

MAIN RESULTS AND THE ROLE OF CHANCE

When compared dual trigger vs hCG; the number of COCs retrieved (8.83 ± 4.74 vs 10.39 ± 5.06 p=0.019) and number of metaphase II (ICSI cycles) (6.68 ± 3.23 v 8.56 ± 4.35 p=0.002) was statistically different. The clinical pregnancy rate per transfer was similar between both groups 29.3% (dual trigger) vs 42% (hCG) p=0.07.

LIMITATIONS, REASONS FOR CAUTION

This is a retrospective study, moreover case and control cycles were performed in consecutive but different years. Future prospective randomized controlled trials are needed to clarify whether the addition of GnRH agonist to standard hCG is effective in improving the outcomes for normal responders in GnRH antagonists cycles.

WIDER IMPLICATIONS OF THE FINDINGS

Dual trigger for final oocyte maturation in normal responders doesn't appear to improve outcomes. This approach should be validated in properly designed RCT before its application in clinical practice in order to avoid unnecessary extra medication in this population.