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P152. The Influence of serum estradiol levels on the day of ovulation trigger on assisted reproductive outcome in HSNZ Kuala Terengganu, Malaysia.

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Context:
The role of estradiol (E2) levels in assessment of ovarian response in in-vitro fertilization/intractyoplasmic sperm injection (IVF/ICSI) has been the focus of interest for many years. The correlation between peak E2 levels on the day of hCG administration with IVF/ICSI outcome has so far yielded conflicting results.
Objective:
To evaluate the influence of the serum E2 levels on the day of administration of ovulation trigger injection on the outcome of assisted reproductive technology (ART).
Method:
Retrospective observational study.
Patients:
The selected subfertile women, who received ART treatment at The Reproductive Services Unit of Hospital Sultanah Nur Zahirah (HSNZ), a Malaysian hospital public regional ART centre providing subsidised ART treatments. Eighty-seven patients who underwent IVF/ICSI using antagonist protocol with either fresh or frozen embryo transfers over a period of 2 years, were included in this study.
Intervention(s):
This was a non-interventional study.
Main Outcome Measured:
The subjects were divided into 4 groups based on the serum E2 levels taken on the ovulation trigger day if their IVF/ICSI cycles: Group A (<10000 pmol/L), Group B (10001-20000 pmol/L), Group C (20001-30000 pmol/L) and Group D (>30000 pmol/L). The baseline characteristics and the reproductive outcome of controlled ovarian stimulation (COH) were analysed between the groups.
Results:
The groups were comparable in terms of age, body mass index (BMI) and ovarian reserve. The baseline Day 2 serum E2 levels and duration of ovarian hyperstimulation were also similar across all groups. The mean dosage of stimulation drugs used were comparable. There were more oocytes retrieved in Groups C & D (15.86 and 17.88) than in Group A (7). The fertilization rate was highest in Group B and C (70.68 and 71.21) and lowest in Group D (62.23). However Group D's number of top quality embryos was highest (6.25) and followed by Group C (5.64).
Conclusion:
The higher E2 levels on the day of ovulation trigger would predict more oocytes collected and more top quality embryos produced. E2 levels in the range of 20000 to 30000 pmol/L likely to predict similarly

good number of top quality embryos while reducing risks of hyper responders such as ovarian hysperstimulation syndrome (OHSS).

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