GONADOTROPHIN-RELEASING HORMONE AGONIST TRIGGER IN AGEING WOMEN LEADING TO HIGHER MII RECOVERY

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Objective: Gonadotrophin-releasing hormone (GnRH) agonist trigger is increasingly common practice to prevent ovarian hyperstimulation syndrome, but it widely application is still not accepted and women undergoing controlled ovarian stimulation (COS) usually receive human chorionic gonadotrophin (hCG) trigger. The aim of this study was to evaluate the number of MII recovered when GnRH-agonist trigger was used in women >37 years of age compared to hCG. Methods: This retrospective cohort study reviewed 214 COS cycles performed in women >37 years of age during 2017/2018. Patients underwent pituitary blockage by GnRH antagonist and COS used urinary or recombinant gonadotrophin, as routine. The trigger was performed by hCG (n=144) or GnRH-agonist (n=70). Cycles were cancelled when no MII was collected. Results: Both groups had mean age around forties' (hCG: 40.9±2.4 versus GnRH-agonist: 40.0±1.8, p=0.002). The total number of oocytes (hCG: 5.3±3.8 versus GnRH-agonist: 9.4±5.7, p<0.001) and MII oocytes (hCG: 4.1±3.2 versus GnRH-agonist: 7.2±4.7, p<0.001) collected were significantly higher in GnRH-agonist group. Five cycles were cancelled due to no MII available for fertilization, and from those, four (80.0%) were in the hCG group. The linear regression confirmed the GnRH-agonist trigger is associated to higher number of MII oocytes (Coef.: 2.78, p<0.001) adjusted to patients age. Despite it is not statistically significant, the logistic regression suggest the GnRH-agonist trigger can be associated to about 70% lower chance of cycle cancelation (OR: 0.58, p=0.634) adjusted to patients age. Conclusions: Even if it is not a classical indication, the GnRH-agonist trigger in ageing women is effective in collecting higher number of MII oocytes, resulting in lower chance of cycle cancelation. As most of cycles had all embryos cryopreserved for future transfers, it was not possible to evaluate the clinical outcomes. Our findings suggest the use of GnRH-agonist broadly and stimulate a prospective randomized study to confirm the outcomes.