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Oral Presentations

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Does dual trigger with human chorionic gonadotropin and gonadotropin releasing hormone agonist improve the outcome of IVF in poor responder women?

Lubis HP, Halim B.

Halim Fertility Center IVF Clinic, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia.

Email: hilmaputrilubis@gmail.com

Background: Poor responder has lower number of follicle and mature oocytes after ovarian stimulation. There are various protocols that have been performed to improve In vitro fertilization (IVF) outcome in poor responders. Dual trigger is one of the triggering protocol to increase the number of retrieved oocytes, the number of mature oocytes, fertilized embryos, implantation and pregnancy rates in normal and high responder women. Several studies have investigated the efficacy of dual triggers in poor responders and the results are still controversial.

Objective: To investigate the efficacy of dual trigger consisted of human chorionic gonadotropin (hCG) plus gonadotropin-releasing hormone agonist (GnRH-a) for final oocyte maturation in increasing number of oocytes retrieved, number of mature oocyte and cleavage embryo in poor responder women.

Materials and Methods: A retrospective analytic study was performed in 260 cycles fulfilling the POSEIDON group 3 and group 4 criteria from January 2018 until October 2019 in Halim Fertility Center IVF Clinic. All poor ovarian responder women underwent modified natural cycle protocol for IVF cycles. Final maturation of oocytes was divided into two groups: group I (114 cycles) received 250 µg of recombinant hCG alone as the single trigger and group II (146 cycles) triggering was done with coadministration of 250 µg of recombinant hCG plus 1 mg GnRH-a simultaneous as dual-trigger. Baseline characteristics and cycle parameters, as well as IVF outcomes of two groups were compared.

Results: In this study, there was no significant difference in the number of retrieved oocytes between the two groups but the number of mature oocytes (MII) was higher in the dual trigger group than single trigger but there was no significant differences between them ($p > 0.05$). The number of fertilized oocytes (2PN) and the number of cleavage embryo were higher in the dual trigger than single trigger groups but there were no significant differences between the two groups ($p > 0.05$).

Conclusion: Dual trigger for final oocyte maturation might improve the outcome of IVF cycles in poor responder women.

Key words: *Dual trigger, Poor responder, In vitro fertilization.*