

## In vitro maturation (IVM) as a new technique to treat polycystic ovary syndrome (PCOS) and induce pregnancy in Indonesia

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### Abstrak

Tujuan Dilakukan penilaian terhadap keberhasilan kehamilan pada penanganan dengan In Vitro Maturation (IVM) pada kasus-kasus PCOS (Poly Cystic Ovary Syndrome) sebagai teknik yang pertama dilakukan di Indonesia. Metode Tulisan ini merupakan laporan kasus dari teknik yang baru dikembangkan di Indonesia. Bahan penelitian adalah 7 kasus dengan PCOS yang jelas, diantaranya 1 pasien dengan riwayat OHSS (Ovary Hyper Stimulation Syndrome) pada prosedur fertilisasi in vitro sebelumnya dan 1 pasien dengan gambaran PCOS, kemungkinan hiperresponder, di Rumah Sakit Family dari bulan Januari sampai bulan Mei 2009. Induksi folikel dengan dosis minimal, primming HCG 10.000 IU pada hari ke 10 dan 40 jam kemudian dilakukan ovum pickup, selanjutnya diinseminasi dan folikel yang terbuahi dilakukan penilaian. Embrio yang bermutu baik ditransfer kedalam uterus. Penilaian kehamilan dilakukan secara biokimiawi, penilaian adanya kantung janin dan denyut jantung. Hasil Telah dilakukan teknik IVM di RS Family, Jakarta Barat bersama dengan tim TRB RS Family pada tujuh kasus. Dari tujuh pasien ditemukan 156 folikel antral atau rata-rata 22 folikel perpasien, ditemukan 81 oosit, dan setelah dimaturasi diperoleh 61 oosit matur (75%). Pada tiga bulan dilakukan fertilisasi in vitro dan 4 kasus dilakukan ICSI (In Cystoplasmic Sperm Infection). Pada serial kasus ini diperoleh 412 embrio, dan 22 buah embrio ditransfer, dan dari 7 kasus diperoleh 2 kehamilan (9%). Kesimpulan Teknik In Vitro Maturation (IVM) merupakan alternatif untuk mengatasi masalah infertilitas pada pasien PCOS dengan keunggulan risiko sindrom hiperstimulasi ovarium yang rendah serta biaya yang lebih murah.

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<b>Abstract</b><br>

Aim To assesse the success of inducing pregnancies in the treatment of PCOS (Poly Cystic Ovary Syndrome) cases with in vitro maturation as a newly application technique in Indonesia. Methods This paper is a report of 7 cases in Indonesia that used the newly developed technique. There were 7 cases confirmed PCOS, in which 1 patient with a history of OHSS (Ovary Hyper Stimulation Syndrome) in a previous IVF procedure and 1 patient with PCOS characteristics, suspected hyper responder, in the Family Hospital from January to May of 2009. Follicular induction was performed with a minimum dose, primming with HCG 10.000 IU, on the 10th day and 40 hours later ovum pick up was performed, followed by in vitro maturation. Subsequently, insemination was performed and the inseminated follicle was assessed. Well qualified embryos then transferred them into the uterus. We then performed assessment of pregnancy biochemically, by the presence of embryonic sac and embryonic heart beat. Results We have performed the IVM (In Vitro Maturation) technique in the Family Hospital, West Jakarta, along with the TRB team of the Family Hospital in seven PCOS cases. From these patients, we have found 156 antral follicles (average of 22 follicles per patient), 82 oocytes, and after maturation, 61 mature oocytes (75 %). In three cases, in vitro fertilization was performed, while in 4 cases ICSI (In Cystoplasmic Sperm Infection) was performed. In these serial cases we obtained 41 embryos, and 22 fertilized embryos were transferred. Of 7 cases, we

achieved two successful pregnancies (29%). Conclusion In vitro maturation is an alternative procedures in solving infertility problems for PCOS patients with lower risk of OHSS and more cost effective than conventional IVF.