

P048

Comparison of two ovulation induction protocols in intrauterine insemination treatment cycles for polycystic ovarian syndrome-related infertility: A retrospective study

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INTRODUCTION: The purpose of this study is to evaluate the clinical advantage of two ovulation induction protocols which do not contain human menopausal gonadotrophins (HMG) in infertile patients with polycystic ovarian syndrome (PCOS) and to see if ovulation induction and intrauterine insemination (IUI) may result in high pregnancy rates in these patients before entering into in vitro fertilization and embryo transfer (IVF & ET) treatments.

METHOD(S):

DESIGN: A Retrospective study.

SETTING: Medical University Laboratory.

INTERVENTION(S): PCOS-related Infertile patients were divided into two groups. Group A (n=167 cycles) received clomiphene citrate and follicle-stimulating hormone (FSH) for ovulation induction. Group B (n=49 cycles) received only FSH for ovulation induction. HCG was administered when the leading follicles reaching 18 mm in diameter, and then IUI were performed 36-40 hours later.

MAIN OUTCOME MEASURE (S): The pregnancy rates and obstetric outcomes were observed.

RESULT (S): The total pregnancy rate per cycle in PCOS-related infertile patients was 34% (74/216), and the early pregnancy abortion rate after IUI was 33% (25/74). Take home baby rate per cycle was around 23% (49/216). The pregnancy rate and abortion rate per cycle in group A was 33% (55/167) and 34.5% (19/55) compared with 40% (19/49) and 31.5% (6/19) in group B respectively. There were no significant statistical significance between group A and B in the pregnancy rate and abortion rate ($P < 0.05$). There were no patients suffered from severe ovarian hyperstimulation syndrome (OHSS) during the study.

CONCLUSION (S): Our study showed that an proper ovulation induction protocol with IUI can lead to high pregnancy rate in PCOS-related infertile patients. HMG contain large amount of LH, so it was not used in this study. Leuteining hormone (LH) is in excess amount in the serum and follicle fluid of PCOS patients, and may be harmful to oocytes and embryos via its androgenic property through thecal cells. Since IUI is safe, efficient, and economical, IUI, instead of IVF & ET, should be first used to treat PCOS-related infertile patients prior to going directly into IVF treatments. The use of IVF & ET or in vitro maturation should not be the first line treatment method for PCOS-related infertility. The high abortion rate of this study also consisted with the previous documented low embryo quality of PCOS patients. Due to relative small amount of gonadotrophins used in the IUI study then IVF & ET treatments, the risk of severe OHSS was highly reduced.