OVARIAN STIMULATION: ART II
Wednesday, October 20, 2004
2:00 P.M.

O-294

OBJECTIVE: To determine the incidence of premature luteinization in patients with Polycystic Ovarian Syndrome (PCOS) using GnRH-Antagonist protocol in IVF cycles and correlation with outcome.

DESIGN: Retrospective case control study.

MATERIALS AND METHODS: Twenty two patients diagnosed with PCOS with a prior unsuccessful IVF cycle using a GnRH-Agonist protocol underwent controlled ovarian hyperstimulation with GnRH-Antagonist between 03/2002 and 12/2003. Premature luteinization was defined as a progesterone level >1.3 ng/ml on day of hCG. Data collected included: age, peak estradiol, and progesterone and LH levels on the day of hCG. In addition, number of eggs retrieved, number of embryos developed, embryos transferred, embryos frozen, implantation rate and pregnancy rate were recorded. Statistical analysis was performed using ANOVA and Chi square methodology.

RESULTS: The incidence of premature luteinization was 50% in patients with PCOS who used a GnRH-Antagonist protocol for IVF. Implantation rate (36.36% vs 22.73%, p=0.03), and pregnancy rate (73% vs 18%, p=<0.0001) were significantly higher in PCOS patients without evidence of premature luteinization.

CONCLUSION: Implantation and pregnancy rates were significantly greater in PCOS patients without evidence of premature luteinization when using a GnRH-Antagonist protocol. The occurrence of premature luteinization occurs frequently, and if it occurs has a negative effect on pregnancy rate.

Supported by: None.

Wednesday, October 20, 2004
2:15 P.M.

O-295
High order multiples and gonadotropin/IUI cycles: How can we reduce the risks? K. M. Silverberg, T. L. Minter, L. J. Hansard, T. C. Vaughn. Texas Fertility Center, Austin, TX.

OBJECTIVE: The reduction of triplet or greater (high-order multiple – HOM) pregnancies represents a major challenge to fertility specialists. Although guidelines to address this issue in ART cycles have been published by SART and ASRM, no such progress has been made in cycles of controlled ovarian hyperstimulation (COH) — despite the fact that COH cycles account for the majority of HOM pregnancies. As in ART, the first step in resolving this problem is to retrospectively attempt to identify risk factors for the development of HOM so that evidence-based guidelines can be suggested and then prospectively evaluated. This study was designed to identify such factors.

DESIGN: Retrospective analysis of all patients undergoing COH with gonadotropins from 2001–2003 in a large private infertility practice.

MATERIALS AND METHODS: All patients received recombinant follicle stimulating hormone (FSH) from cycle day 2 or 3 until follicular maturity was attained. A single injection of hCG (urinary or recombinant) was administered when at least one follicle exceeded 19 mm in average diameter, and IUI was performed on the following 2 consecutive days. Both intra and extra-uterine gestational sacs were included in the determination of type of pregnancy – singleton or twin (Group 1), or HOM (Group 2). Statistical analysis was performed using t-tests and correlation testing.

RESULTS: 1481 consecutive COH cycles were evaluated. There were 311 pregnancies (21%); 253 were ongoing (17%). 171 pregnancies (68%) were singletons, 59 (23%) were twins, and 23 (9%) were HOM. No statistically significant differences were observed in total dose of gonadotropin administered, length of stimulation, peak E2 level, semen parameters, or number of follicles > 19 mm on the day of hCG administration between the 2 groups. The parameters in Table 1 were significantly different. Withholding hCG in the presence of > 5 follicles > 13 mm, > 4 follicles > 15 mm, or > 2 follicles > 17 mm would have resulted in the cancellation of 12 of the 23 HOM pregnancy cycles reported herein, with a corresponding decrease in HOM from 9% to 4.3%.

CONCLUSION: Previous reports have suggested a significant association between peak E2 levels, number of follicles > 19–20 mm, and/or the total number of follicles > 10 mm and the occurrence of HOM. This study suggests different findings; specifically that the incidence of HOM is directly related to the number of intermediate follicles on the day of hCG administration. Based on these findings, we can propose evidence-based, specific suggestions aimed at reducing the incidence of HOM in gonadotropin stimulated COH cycles.

Supported by: None.

Wednesday, October 20, 2004
2:30 P.M.

O-296
Cost analysis of ganirelix versus luteal-phase lupron downregulation per assisted reproductive technology (ART) cycle and pregnancy achieved. R. L. Gustofson, J. H. Segars, F. W. Larsen. Combined Federal Fellowship in REI at NIH, Walter Reed Army Medical Center, National Naval Medical Center, and Uniformed Services University of the Health Sciences, Bethesda, MD; Walter Reed Army Medical Center ART Program, Washington, DC.

OBJECTIVE: Both luteal-phase lupron downregulation (luteal lupron) and ganirelix have been shown to be efficacious in preventing a luteinizing hormone (LH) surge in ART cycles. Based on the work of the North American Ganirelix Group, ganirelix has been shown to be safe and effective with a reduction in the number of injections, ampules of gonadotropins, and days of stimulation with a modest decrease in pregnancy rates. The purpose of this analysis was to evaluate the relative cost differences per cycle and per pregnancy achieved by both methods of LH surge suppression.

DESIGN: Cost analysis model.

MATERIALS AND METHODS: Utilizing data from the North American Ganirelix Group 2001 and CDC/SART Data 2001, a cost analysis model was derived. Medication costs were calculated to be the average of three national fertility drug specialty pharmacies obtained in April 2004. Per ASRM information, the average national cost of an ART cycle was $12,400 including medications without regard to the use of ICSI. The following assumptions were made: 1) ART cycle without medications cost was $10,000 including stimulation, retrieval, transfer (50% IVF $9,000, 50% ICSI $11,000); 2) ART cycle cost if cancelled before retrieval was

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