

**OBJECTIVE(S):** Patients often question whether success rates are compromised when their ART procedures fall on a weekend. They may hypothesize that laboratory operations, staffing and embryologist fatigue might adversely affect outcome. We set out to determine if the day of the week that a patient had an oocyte retrieval (VOR), insemination, ICSI or embryo transfer (ET) affected success rates.

**MATERIALS AND METHOD(S):** Clinical and laboratory data from electronic medical records were analyzed for cycles occurring between 06/01/02 and 12/31/10. A total of n=4575 fresh, autologous IVF cycles were included in the study. In order to minimize confounding variables in the analysis, our focus was on optimal candidates; thus the study was limited to patients with age <40, FSH <13 mIU/ml, >3 oocytes retrieved, maximal endometrial thickness >7mm, and stimulation days <12.  $\chi^2$  tests were performed to analyze for dependence between patient success rates (defined as the presence of fetal heart beats) and the day of the week on which the procedure (VOR, Insemination, ICSI or ET) fell.

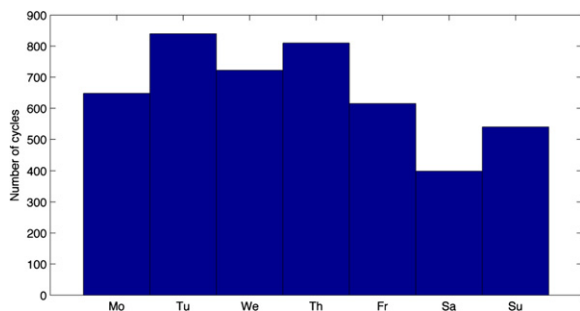
**RESULT(S):** The daily number of procedures ranged from 1-10 VOR's (mean:  $3.1 \pm 1.6$ ) and from 1-8 ET's (mean:  $3.0 \pm 1.5$ ) over the study period. The total number of VOR cases performed on any given day of the week varied from ~400-850 (Figure). Patient success rates were similar regardless of the day of the week that the procedures were performed (Table).

**CONCLUSION(S):** Many IVF centers, including ours, program cycle start dates to maximize weekday oocyte retrievals. However, due to the heterogeneity of patient response, in a large center, there will still be a significant percentage of patients undergoing weekend procedures. Our data demonstrate that in a well-staffed and trained embryology laboratory, the day of the week that a VOR, insemination, ICSI or ET occurred did not impact the likelihood of IVF success. Any concerns associated with being treated on a weekend can be alleviated. We encourage other centers to perform similar quality assurance evaluations by monitoring these and other variables that could potentially affect reproductive outcomes.

Procedure	Mean Pregnancy Rate ( $\pm$ SD)	P-value*
VOR	56.8% (0.7)	0.11
Insemination	56.9% (1.1)	0.13
ICSI	56.6% (1.0)	0.11
ET	56.8% (0.7)	0.17

\*Comparing the 7 days of the week.

Figure



#### P-4

**Cervical Mucus Monitoring in Women Trying to Conceive.** Emily Evans-Hoeker, MD, Mamie McLean, MD, Anne Z. Steiner, MD, MPH. University of North Carolina at Chapel Hill.

**BACKGROUND AND SIGNIFICANCE:** Cervical mucus monitoring has been promoted as a mechanism by which women may determine their fertile window. However, to date, studies analyzing the efficacy of cervical mucus monitoring have all included formal instruction on cervical mucus monitor-

ing and therefore may not be generalizable to women outside of study conditions.

**OBJECTIVE(S):** To characterize cervical mucus monitoring in the general, non-infertile population and determine the extent to which such monitoring decreases time-to-pregnancy.

**MATERIALS AND METHOD(S):** This study is a secondary analysis of a prospective cohort study of women, 30-44 years old, with no history of infertility, who had been trying to conceive for less than 3 months. Participants completed a baseline survey, providing demographic and medical history data. While attempting to conceive, women completed a daily diary for up to 3 months in which they recorded vaginal bleeding, intercourse, method and result of ovulation monitoring (temperature, ovulation predictor kit, cervical mucus) and pregnancy test results. Women were followed without intervention until pregnancy or 6 months. Student's t-test, ANOVA, Fisher's exact were used for bivariate analyses. Cox regression analysis was used to compare fecundability between groups. A fecundability ratio (FR) less than 1 suggests a lower probability of pregnancy per cycle compared to the reference group.

**RESULT(S):** A total of 339 women were enrolled between April 2008 and December 2010 with daily diary data available for 657 cycles. Of all subjects, 41.6% recorded cervical mucus scores while trying to conceive; however, of those, only 18.5% (7.7% of all subjects) monitored cervical mucus on a consistent basis (> 66% of days in a given menstrual cycle). Compared to women who did not monitor cervical mucus, women who performed consistent cervical mucus monitoring were younger ( $31.9 \pm 2.1$  years vs  $33.5 \pm 3.2$  years,  $P=0.01$ ), more likely to be nulligravid (62% vs 40%,  $P=0.04$ ) and more likely to report a history of cervicitis (12% vs 5%,  $P=0.14$ ). Cervical mucus monitors were also more likely to use additional ovulation predictors such as kits (33% vs 18%,  $P=0.04$ ) and temperatures (12% vs 5%,  $p<0.001$ ). However, consistent cervical mucus monitoring did not improve fecundability (FR 0.95, 95% CI: 0.563-1.60), after adjusting for age, previous pregnancies and history of cervicitis.

**CONCLUSION(S):** Consistent cervical mucus monitoring is uncommon among women attempting to conceive. Monitoring is more common in younger, nulligravid women, who use additional methods to monitor ovulation. Cervical mucus monitoring without formal instruction does not appear to improve fecundability in the first 6 months of attempt.

SUPPORT: NICHD R21 HD060229.

#### P-5

**Higher Body Mass Index Significantly Affects Intracytoplasmic Sperm Injection Success Rate.** Ahmed F. Galal, MD,<sup>a</sup> Dina N. Elhelaly, MD,<sup>b</sup> <sup>a</sup> University of Alexandria, Egypt; <sup>b</sup> high institute of Public health, Egypt.

**OBJECTIVE(S):** Obesity is a rising health problem worldwide that is known to impair human reproduction and considered as a contributing factor for infertility. Its impact on all outcomes of ICSI program among infertile women was assessed in this study.

**DESIGN AND METHODOLOGY:** The study is a prospective cohort that was conducted upon 220 infertile females after taking local IRB approval. All females aged from 20-35 years that were divided into two groups each one contains 110 females according to Body Mass Index (BMI) value (non obese group with BMI <25 kg/m<sup>2</sup> & overweight and obese group with BMI >25 kg/m<sup>2</sup>). Women in both groups received same ovarian hyperstimulation protocol (GnRH-agonist pituitary down-regulation with a combination of recombinant-FSH and human-menopausal gonadotropins). The same treating reproductive endocrinologists and embryologists under similar clinical and laboratory sittings conducted steps of ICSI cycle.

All outcomes of ICSI cycles was assessed in both groups & the impact of body fat composition on these outcomes was evaluated using appropriate statistical test for each one.

**RESULT(S):** The results showed a significant higher number of cleaved oocytes (7.35 vs 9.05) in favour of low body mass index. Fertilization rate was also statistically significant in lean women (85.6 % versus 59 %) that lead to a significant higher number of good quality embryos to be transferred with p value =0.002. Overall the clinical pregnancy rate was significantly higher in lean women with 68 % pregnancy rate compared to 53 % in obese persons. There was a trend for a higher HMG dosage in obese women compared to lean ones however this was non significant, the same was applied to the duration of stimulation.

**CONCLUSION(S):** Obesity has a negative impact on each outcome of ICSI cycles and leads to marked reduction in the pregnancy rate in patient with infertility undergoing ICSI treatment. So it should be recommended that obese women should be advised to loose weight and treatment either