

minutes). A singleton pregnancy was the most desirable type of pregnancy for both patients and their partners (71 versus 73%). Despite similar counseling time, patients consistently and significantly overestimated the risks of prematurity for twins (median 20 versus 10%,  $P < 0.001$ ) and triplets (40 versus 22.5%,  $P = 0.001$ ) as well as the risks of preeclampsia for twins (20 versus 15%,  $P = 0.005$ ) and triplets (30 versus 23%,  $P = 0.012$ ). Patients were also more likely to overestimate the risks of death for 2500 gram infants (5 versus 3%,  $P < 0.0001$ ) and 1500 gram infants (25 versus 10%,  $P < 0.0001$ ). When presented with clinical scenarios with multiple suboptimal outcomes (preterm delivery, preeclampsia and clinical depression), patients were twice as likely to consider it desirable or highly desirable compared with their partners ( $P < 0.03$ ).

Conclusions: Patients and their partners appear to receive adequate counseling from their physician and mental health providers. While patients significantly overestimate the risks associated with multiple gestation compared with their partners, both estimates are well above actual risk. Patients are much more likely to consider a suboptimal scenario desirable than their counterparts.

### P-303

**Why Leave a Donor Insemination Program Before Conceiving?** <sup>1,2</sup>J. E. Scheib, <sup>1</sup>A. C. Steele, <sup>1</sup>P. R. Shaver, <sup>2</sup>M. Riordan. <sup>1</sup>Department of Psychology, University of California, Davis, CA and <sup>2</sup>The Sperm Bank of California, Berkeley, CA.

Objective: Success rates with donor insemination (DI) are high compared to other forms of assisted reproduction (e.g., IVF) and the financial costs relatively low. Nonetheless, a significant proportion of recipients leave prior to conceiving. This study identified factors related to leaving a DI program prior to conceiving.

Design: Anonymous telephone interviews were conducted with a representative sample of recipients who had used the sperm bank between 1995–97 and undergone at least one cycle attempt.

Materials and Methods: The sub-sample of recipients ( $n = 49$ ) who left prior to conceiving, answered open-ended questions about why they left, completed standardized measures of social support and relationships, and provided demographic information. The overall response rate was 80.2%. Data were analyzed using Chi-square, Fisher's exact, and t tests.

Results: The most common reasons for leaving were health and fertility problems (reported by 33% of respondents), pursuing other reproductive options (33%), experiencing logistic problems (35%), and feeling that DI was too emotionally difficult (27%). Other reasons included financial limitations (20%), personal changes (12%), and hitting personal deadlines (8%). Because lesbians comprised 59% of our sample (similar to the whole sample (64%)), we analyzed whether sexual orientation was related to responses. It was—lesbians were more likely to report logistic problems (e.g., time constraints, shipping problems, limited choice of donors) and that they were pursuing other reproductive options (e.g., IVF, fresh sperm through a known donor). Heterosexual women more often reported leaving because of a personal change (started a relationship, changed careers). We also compared reasons given by respondents who stopped all attempts to conceive (47%) to those of respondents who continued elsewhere (53%). Women who stopped completely were more likely to report leaving because of health and fertility problems, hitting personal deadlines, and DI being too difficult emotionally. They were also significantly older when using DI ( $M = 40.9$ ) than those who continued elsewhere ( $M = 36.2$ ), and scored lower on measures of satisfaction with social support. Women who continued elsewhere were more likely to report experiencing logistic problems and pursuing other reproductive options that they felt would increase their chance of conceiving.

Conclusion: Women who leave DI programs fall into two categories—those who stop trying to conceive altogether and those who go on to other programs and reproductive options. Their reasons for leaving suggest that, although DI is the simplest form of assisted reproduction, recipients still face significant emotional and logistic difficulties that can hinder their attempts to conceive. Programs that provide psychological and logistic support may help women meet these challenges and increase the probability that recipients conceive prior to leaving DI programs.

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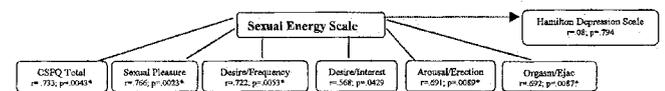
### P-304

**Sexual Energy Scale (SES): A Valid Assessment of Sexual Dysfunction in a Clinical Setting.** J. K. Warnock<sup>1</sup>, A. H. Clayton<sup>2</sup>, W. R. Yates<sup>1</sup>, J. C. Bunden<sup>1</sup>. <sup>1</sup>University of Oklahoma Health Sciences Center, Tulsa, <sup>2</sup>University of Virginia, Charlottesville, VA.

Background: Sexual dysfunction (SD) is gaining increased attention as a public health concern. Laymann et al (1999) documented a 43% prevalence of SD in women and a 33% prevalence of SD in men. Progress in the research and treatment of SD is hampered by the lack of practical and valid psychometric instruments. The Sexual Energy Scale (SES) provides a simple, easy and objective means of assessing the patient's lost familiar experience of sexual desire and vital/sensual energy. The SES also measures changes in sexual function following an intervention. The scale is a visual analog model in which the patient rates their current sexual energy level on a scale of 1 to 10.

Materials and Methods: To determine concurrent validity, the Changes in Sexual Functioning Questionnaire (CSFQ) and the SES were completed by a series of psychiatric patients ( $N = 17$ ) who presented for treatment of medication induced SD. The CSFQ is a 32 item structured interview designed to measure illness and medicated-related changes in sexual functioning with reliable and valid psychometric properties. Correlation coefficients were calculated for SES and the CSFQ total and subscales. In addition, the patients were readministered both the SES and the CSFQ 1 month after treatment for their sexual dysfunction. Correlation coefficients between the change score for the SES and the change scores for CSFQ total and subscale scores were also obtained.

Results: Figure 1 shows the correlation coefficients between the SES and the CSFQ and subscales. The change scores on the SES correlated significantly with change scores on the following CSFQ scales: SES & CSFQ global score  $r = .679$ ;  $p = .01$ ; SES & Desire/Freq  $r = .647$ ;  $p = .01$ ; SES & Desire/Interest  $r = .66$ ;  $p = .01$ ; SES and Arousal  $r = .625$ ;  $p = .02$ .



Conclusions: The SES indicates good concurrent validity with the CSFQ. Discriminate validity is supported by the low correlation between the SES and the Hamilton Depression Scale. The SES can be used by clinicians as an easy valid tool in the assessment of SD.

### P-305

**Patient Perception and Awareness Regarding Diagnosis and Treatment of Polycystic Ovary Syndrome (PCOS) as Measured by Confidential Self-Reports.** <sup>1</sup>E. S. Sills, <sup>1</sup>M. Perloe, <sup>2,4</sup>D. P. Levy, <sup>3</sup>M. G. Genton, <sup>4</sup>G. L. Schattman, <sup>1</sup>M. J. Tucker. <sup>1</sup>Georgia Reproductive Specialists, Atlanta, GA; <sup>2</sup>Service de Gynécologie, Hotel Dieu, Paris, France; <sup>3</sup>Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts; <sup>4</sup>Center for Reproductive Medicine & Infertility, Weill Medical College of Cornell University, New York, NY.

Objective: To evaluate self-reported perception, awareness, selected demographic and clinical parameters regarding PCOS among gynecology patients.

Design: Anonymous, confidential questionnaire.

Materials and Methods: Using a computer-based evaluation instrument, a 15-item questionnaire addressed the following parameters by internet-accessed questionnaire: patient age, time since (and reason for) last gynecology office visit, gravida status, and history of prior ovulation induction. Additionally, respondents were asked this question: "If your PCOS could be safely and effectively helped by something else besides fertility drugs or birth control pills, would that interest you?" Incomplete questionnaires were not entered, and responses were electronically tabulated to block duplicate submissions from the same individual.

Results: A total of 657 women participated in this study. The majority of patients (63%) reported their age as between 26–34 y; mean BMI was 30.4

in this group. Pregnancy history identified 343 women (52%) with at least one pregnancy (including miscarriage), while 314 (48%) registered as nulligravidas. For most women (86%), their most recent gynecology visit occurred within the past 6 months, although a year or more had elapsed for a small sub-set of patients (4%). Reasons for making a doctor's appointment in this study group were: routine gyn check-up (36%), non gyn check-up (14%), medication refill (6%); difficulty in getting pregnant or "other" accounted for 44% of gynecology visits. Most women in this sample (61%) had taken some kind of fertility medicine ( $n=404$ ). Patients first became aware of PCOS by their physician (63%), friend or family member (7%), magazine article (6%), radio/television/newspaper (5%), and "other" source (18%). Patient emotions associated with PCOS included "frustration" (67%), "anxiety" (16%), "sadness" (10%), and "indifference" (2%). Self-reported aptitude regarding PCOS was scored as high or "very aware" in 61% of women ( $n=403$ ). Interest in PCOS treatments other than OCPs or fertility drugs was expressed by 99% ( $n=648$ ) of the sample.

Conclusions: In this unscreened patient population, most women associated negative emotions with PCOS although the self-reported knowledge level for this disorder was high. These study subjects regarded their ob/gyn as an integral component of PCOS patient education and management. Although clomiphene and OCPs have traditionally dominated PCOS management strategies, this research suggests patients may be dissatisfied with current treatment options. Indeed, this investigation finds women highly receptive to other treatment modalities. Further large-scale studies are needed to clarify patient perceptions of PCOS, to stratify responses by specific diagnostic categories, and to study how physician-mediated patient education for PCOS can be optimized.

## NURSES IN REPRODUCTIVE MEDICINE

Tuesday, October 24, 2000

### P-306

**Endometrial Thickness and Endometrial Patterns as Predictors of First Trimester Spontaneous Abortion (SpAb) in Pregnancies Achieved Through Intra-Uterine Insemination (IUI).** T. L. Viancos, T. D. Nichtberger, M. E. Fusillo, S. K. Frederick, V. L. Schnell. Center of Reproductive Medicine, Webster, TX.

Objective: To assess whether endometrial thickness and or endometrial patterns on day of hCG injection is predictive of SpAb during the first trimester in pregnancies achieved with IUI.

Design: A retrospective chart review of all IUI pregnancies from 1998 through 1999. Excluded were ectopic pregnancies and chemical pregnancies with hCG levels less than 50 mIU/ml.

Materials and Methods: Measurement of endometrial thickness in millimeters and assessment of endometrial pattern categorized as hypoechoic, echoic, or hyperechoic in relation to the myometrium via transvaginal ultrasound on day of hCG administration.

Results: Of the sixty-five pregnancies reviewed, fourteen were SpAb's (22%) during the first trimester. The SpAb group had endometrial thickness ranging from 7 mm–14 mm; the mean thickness was 10 mm  $\pm$  3.8. ( $P=0.5$ ). Seven of the fourteen SpAb's were attributed to genetic abnormalities confirmed by genetic karyotype on the products of conception; the remaining seven SpAb's had no identifiable cause. Five of the seven SpAb's (71%) that did not have evidence of genetic abnormalities had a hyperechoic pattern of the endometrial lining in comparison to the myometrium. Fifty-one pregnancies were carried successfully through the first trimester. The pregnancy group endometrial thickness ranged 4 mm–15 mm; the mean was 9 mm  $\pm$  3.22 ( $P=0.5$ ). Six of the fifty-one (12%) successful pregnancies had hyperechoic endometrial patterns, and three (6%) had echoic endometrial patterns. The remaining forty-two (82%) had hypoechoic endometrial patterns.

Conclusion: Once pregnancy was achieved, the endometrial thickness on day of HCG administration had no predictive value for determining a successful first trimester pregnancy outcome. Although genetic abnormalities account for 50% of SpAb's in this retrospective study, endometrial patterns may be predictive in assessing the risk of SpAb in first trimester pregnancies.

## REPRODUCTIVE BIOLOGY

Tuesday, October 24, 2000

### P-307

**Enhanced Green Fluorescence Protein (EGFP) as a Non-Invasive In Vivo Marker to Assess the Efficiency of Transgenesis and Nuclear Transplantation.** Z. Y. He, H. C. Liu, Z. Rosenwaks. The Center for Reproductive Medicine and Infertility, Weill Medical College of Cornell University, New York, NY.

Objective: We have successfully used mouse secondary polar bodies (2PBs) and female pronuclei (FPNs) to reconstruct viable embryos. However, factors attributing to the success of reconstruction remain unclear. The EGFP gene encoding a protein emitting green fluorescent light which can be easily observed by a fluorescent microscopy. In this study, we tried to establish the method of integrating this exogenous DNA into the genome of the reconstructed embryos as a non-toxic biological marker to assess the efficiency of transgenesis and nuclear transplantation.

Design: Second PBs and female PNs were used as vehicles to carry exogenous EGFP gene into genomic DNA of the reconstructed embryos during nuclear transfer. The expression of the integrated EGFP was then used as a marker to monitor embryo development after reconstruction.

Materials and Methods: Mouse 2PBs and F-PNs were isolated from zygotes derived from PMSG/hCG superovulated B6D2F1 mice. After incubation with purified linearized pEGFP-C1 DNA fragments (500 ng/ml) in the presence of polylysine for 20 min, 2PBs or FPNs were transferred into recipient zygotes and then fused electronically. The developmental potential of the reconstructed embryos and the signal of the green fluorescent protein were evaluated under the bright-field inverted microscope and the fluorescence microscope with a FITC-fluorescence filter set.

Results: The development of the reconstructed embryos and the efficiency of EGFP signal can be summarized in the following table.

Group	Total	Fused (%)	Survived (%)	Number of embryos	
				Blastocyst (%)	EGFP + (%)
F-PN	76	65 (85.6)	51 (78.5)	19 (37.3)	5 (26.3)
2PB	89	71 (79.8)	57 (80.3)	14 (25.6)	2 (14.2)

Conclusion: We have developed a new method which combines embryo nuclear transplantation and transgenesis to study early embryogenesis. We demonstrated that reconstructed mouse embryos expressed EGFP, which in turn facilitates the evaluation of embryo characteristics of the reconstructed transgenic embryo. The integrated EGFP may become an important non-invasive marker for studying the synchronization between the nuclei and cytoplasm after nuclear transfer, and to study and evaluate the mechanisms of DNA integration during genomic modification. Our novel approach of using nuclei as a vehicle for DNA delivery during nuclear transfer could potentially be utilized in clinical application in the area of gene therapy. Furthermore, this new method of mammalian transgenesis with modified exogenous DNA (i.e., EGFP/protein fusion gene) can offer additional avenues to study intra- and inter-cellular communication, and subcellular transportation (i.e., nuclear-cytoplasmic transportation), etc.

### P-309

**Offspring Produced by Nuclear Transfer Can Evaluate the Developmental Competency of the Nucleus and Cytoplasm of Oocytes from Old Mice.** H. Liu, L. C. Krey, J. Zhang, J. A. Grifo. Program for In Vitro Fertilization, Reproductive Surgery and Infertility, New York University School of Medicine, New York, NY.

Objective: Decline of human reproduction potential with increasing maternal age can be attributed to several factors including low egg number and an increased rate of aneuploidy. This latter problem has been hypothesized to be associated with a cytoplasmic defect(s) during oocyte maturation. However, there is no suitable animal model to test this hypothesis. An age-related decline in fecundity has also been noted in mice. This project evaluates whether cytoplasmic or nuclear defects impact on the developmental competency of oocytes from aged mice.