



**CONCLUSION:** Encouraging correlations were identified that objectively describe the relationships between different areas of developing blastocysts considered for transfer. It appeared that area measurements were more sensitive than linear diameter measurements. A combination of objective measurements of a series of parameters such as blastocyst:ICM ratio, ICM area, blastocyst area and zona thickness may assist to objectively identify the best blastocyst for transfer.

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Tuesday, October 24, 2006  
4:30 pm

#### O-122

**POSITIVE PREDICTIVE VALUE OF SALINE INFUSION SONOHYSTEROGRAPHY FOR THE DIAGNOSIS OF INTRAUTERINE PATHOLOGY IN A FERTILITY PRACTICE.** M. Fernandez, S. A. Sanchez, R. Bennett, A. Palumbo. Centro de Asistencia a La Reproducción Humana de Canarias, La Laguna, Tenerife, Spain; Westchester Reproductive Medicine, Yorktown Heights, NY.

**OBJECTIVE:** To determine the positive predictive value of sonohysterography (SHG) for the diagnosis of intrauterine lesions prior to fertility treatment.

**DESIGN:** Retrospective database analysis.

**MATERIALS AND METHODS:** We reviewed the medical records of all infertility patients who underwent SHG in our clinic for evaluation of the uterine cavity between September 2004 and April 2006. SHG was performed using a standard intrauterine insemination catheter, sterile saline solution and a high resolution Toshiba ultrasound. Hysteroscopy was performed using a 5 mm Wolf hysteroscope with saline solution as distension media or a 9 mm Wolf resectoscope with glycine as distension media. The data were then analyzed comparing findings on SHG with findings on hysteroscopy and the positive predictive value of SHG was calculated.

**RESULTS:** 309 infertility patients underwent SHG. Of the 309 SHGs performed, 226 were normal and 83 were abnormal. Of the 83 patients who had abnormal findings, 71 went on to have hysteroscopy. In every one of these cases some intrauterine pathology was found. In 59 of these cases the diagnosis that was made by SHG was confirmed by hysteroscopy with no additional pathology found (9 intrauterine adhesions, 1 calcification, 4 submucous myomas, 1 uterine septum and 44 endometrial polyps). In 10 patients the diagnosis made by SHG was confirmed by hysteroscopy but additional pathology was found. In 2 cases the diagnosis made by SHG was not confirmed by hysteroscopy and a different pathology was found.

**CONCLUSION:** In all cases in which the SHG detected an abnormality, the hysteroscopy confirmed that the cavity was abnormal (positive predic-

tive value 100%). The diagnosis was accurate and complete in 59 of 71 cases (83%), accurate and incomplete in 10 of 71 cases (14.1%) and inaccurate in 2 of 71 cases (2.8%). In conclusion, SHG is a very specific and accurate technique for the evaluation of the uterine cavity prior to infertility treatment.

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#### O-123

**DETECTION AND REPRODUCIBILITY OF OVARIAN AGEING.** B. Vural Sr., E. Caliskan, A. Tekin, E. Coskun. Kocaeli Univ, Kocaeli, Turkey.

**OBJECTIVE:** To determine age related changes in the ovaries and reproducibility of ultrasound measured parameters of ovarian ageing.

**DESIGN:** Prospective follow-up study.

**MATERIALS AND METHODS:** Fifty-three women in reproductive ages with regular menstrual periods and proven fertility were included in the study. None of the participants had endocrine disorders, ovarian surgery or hormonal therapy during the last 12 months. All volunteers had menstrual day 3 ultrasound scanning by two experienced colleagues. First observer performed scanning immediately after first scan observer 2 performed scanning and after one hour of resting observer 1 repeated ultrasound examination. Correlation analysis was performed for age related changes in FSH, inhibin B, total antral follicle count (TAFC), total ovarian volume (TOV), stromal and ovarian Doppler flow indices of the first scanning of observer 1. Intraobserver and interobserver agreement was measured by correlation analysis and kappa calculation.

**RESULTS:** Age was negatively correlated with TAFC ( $r=-0.61$ ,  $p<0.001$ ) but no correlation was found with TOV, inhibin B, FSH level, ovarian artery and ovarian stromal Doppler indices. Inhibin B was weakly correlated with TAFC ( $r=0.3$ ,  $p=0.01$ ) and FSH level was moderately negatively correlated with TAFC ( $r=-0.43$ ,  $p=0.001$ ). Intraobserver correlation was high for left ovarian volume ( $r=0.92$ ,  $p<0.001$ ), right ovarian volume ( $r=0.90$ ,  $p=0.001$ ), left ovarian antral follicle count ( $r=0.97$ ,  $p<0.001$ ) and right ovarian antral follicle count ( $r=0.96$ ,  $p<0.001$ ). Interobserver correlation was moderate for these measurements (respectively:  $r=0.73$ ,  $p<0.001$ ;  $r=0.48$ ,  $p<0.001$ ;  $r=0.71$ ,  $p<0.001$ ;  $r=0.69$ ,  $p<0.001$ ). When total follicle count and ovarian volume was calculated correlations improved. Intraobserver correlation for TAFC ( $r=0.98$ ,  $p<0.001$ ), for TOV ( $r=0.94$ ,  $p<0.001$ ) and interobserver correlation for TAFC ( $0.88$ ,  $p<0.001$ ) and for TOV ( $r=0.79$ ,  $p<0.001$ ) showed strong positive correlation. Interobserver agreement for TAFC was moderate ( $\text{kappa}=0.49$ ). No intraobserver or interobserver correlation was found in Doppler flow indices.

**CONCLUSION:** Age was only correlated with total antral follicle count which was the most reproducible ultrasound measurement.

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5:00 pm

#### O-124

**COST OF SONOHYSTEROGRAPHIC (SHG) VERSUS HYSTERO-SCOPIC (HS) SCREENING PRIOR TO IN VITRO FERTILIZATION (IVF).** A. H. Kim, H. M. Rone. Fertility Physicians of Northern California, San Jose, CA.

**OBJECTIVE:** To compare the cost of initial SHG screening of the uterine cavity followed by treatment of uterine pathology by hysteroscopy to routine HS screening prior to IVF.

**DESIGN:** Retrospective identification of IVF patients over a 2-year period who underwent SHG screening followed by hysteroscopy, if indicated, prior to treatment. Cost analysis comparisons were made between SHG screening and HS screening using different models.

**MATERIALS AND METHODS:** Patients who underwent IVF treatment during a 2-year period beginning in 2004 and had SHG evaluation of the uterus prior to treatment were identified. Abnormal SHG findings and the number of patients undergoing hysteroscopy for the treatment of lesions