

FP33 EFFECTS OF SPERM MOTILITY SURVIVAL RATE ON FERTILIZATION RATE IN IVF PROGRAM.

Y. Yavas¹, S. Roberge¹, P. Shirazi¹, A. Agrawal¹, M. Llano¹, J. Wong^{1,3}, I. Lacanna¹ and F. Khamsi^{1,2}. Toronto Fertility Sterility Institute¹, and Department of Medicine² and Obstetrics and Gynecology³, University of Toronto.

The objective was to determine if the sperm motility survival rate is correlated to fertilization rate in women undergoing IVF. Data on 85 women of 24 to 44 years old were analyzed. Sperm concentration, total sperm count, and percentage of motile spermatozoa at 1 h, 24 h and 48 h after collection were recorded. Oocytes were retrieved by a needle-guided ultrasound procedure and inseminated by standard procedures. At 48 h after retrieval, the oocytes were observed for embryo development. Fertilization rate was calculated as the ratio of number of embryos obtained per oocyte retrieved. The average sperm concentration was 72 ± 69 millions/ml (mean \pm sd), the average total sperm count was 365 ± 1255 millions, and the average sperm motility at 1 h, 24 h and 48 h after collection were $55.7 \pm 18.3\%$, $40.8 \pm 30.4\%$, and $15.2 \pm 21.4\%$, respectively. The mean number of oocytes and embryos obtained were 6.6 ± 4.3 and 4.3 ± 3.6 , respectively, with a fertilization rate of 0.63 ± 0.36 . Total sperm count or sperm motility percentage at 24 h and 48 h after collection were not correlated to fertilization rate ($P > 0.25$). The sperm concentration and motility at 1 h after collection were correlated positively to the fertilization rate ($r = 0.29$ and $r = 0.24$, respectively; $P < 0.03$). The number of oocytes, embryos and fertilization rate were correlated negatively to the age of women ($r = -0.28$, $r = -0.30$, and $r = -0.20$, respectively; $P < 0.05$). In conclusion, the sperm concentration and sperm motility at 1 h after collection may be used to predict the fertilization rate outcome from IVF.

FP34 IS STRICT MORPHOLOGY A PREDICTOR OF PREGNANCY IN IVF?

C. Leeds, E. Younglai, A. Bettencourt, H. Bissessar, E. Hughes, T. MacDonald, P. Xia
Gamete Biology Laboratory, Hamilton Health Sciences Corp., McMaster Campus, Hamilton, Ontario, L8N 3Z5.

Objectives: Strict morphology has previously been shown to be a good predictor of fertilization. In this study we wished to re-assess whether strict morphology on neat semen samples can be used to predict pregnancy outcome in our IVF program.

Method: The strict morphology assessment was performed by several individuals on semen samples before processing for insemination/injection. Smears were made on slides which were air dried and stained using the Diff-Quik method and the Tygerberg criteria used for morphology.

Results: There were 37 pregnancies (22.7%) in the 163 cases chosen for study. There was no correlation between strict morphology scores and outcome as shown in the table. In addition strict morphology did not correlate with fertilization rates whereas total motile sperm concentration did.

Pre-wash morphology	pregnant/cases	% pregnancy
0-3	6/36	18.8
4-6	11/39	28.2
7-9	12/46	26.1
10-12	5/33	15.2
>12	3/13	23.1

Conclusion: Strict morphology scores did not predict pregnancy in the IVF cycles examined