chromosome condensation (PCC) in the penetrating sperm nucleus. It may be because of fertilization failure in IVF and the formation of PCC may be associated with the immaturity of oocyte. The objective of this study was to determine if ICSI could alter the incidence of PCC.

Design: The success ICSI in terms of fertilization rate and resulting pregnancies using two methods of oocyte activation and sperm immobilization was evaluated. The incidence of PCC occurring in unfertilized oocytes from two groups was compared.

Materials and Methods: ICSI cycles (n=53) was performed for couples suffering from severe male infertility and dysfunction of fertilization. According to the states of sperm used and treatment for oocyte activation, ICSI cycles were retrospectively analyzed in two groups. In group A (38), sperm was immobilized by touching the tail either at its "tip" or in the "midpiece". The ooplasm was slightly aspirated into the pipette. In group B, sperm was immobilized by a forceful immobilization of the sperm so that a bending of the tail was observed ("hard" touching). The ooplasm was aspirated gently until an outflow of cytoplasm was visualized in the injection pipette. Outcome of ICSI in terms of fertilization and pregnancy rates in each group were analyzed with χ^2. Unfertilized oocytes (n=38, 10) from two groups were studied with cytogenetic method.

Results: A total of 396 metaphase II oocytes out of 481 were used for ICSI. Results were divided into two groups (n=38, 15). Oocyte damage dropped from 14.2% in group A to 8.4% in group B. Normal fertilization for each group was 55%, 90%, respectively ($p<0.05$). Pregnancy rate per egg retrieval was 13.2% in group A and 46.7% in group B ($p<0.05$). There were 19.4% of PCC occurring in group A and none in group B.

Conclusion: This study indicates that ICSI could not only yield high fertilization rates (90%), but also minimize the incidence of PCC. It may directly relate to two crucial steps (immobilization of sperm and oocyte aspiration) used in ICSI procedure. This study also suggests that it is possible to overcome one cause of IVF fertilization failure resulting from the formation of PCC by using improved ICSI technique in the future.

O-098

The Linear Increase in Pregnancy Loss After Clinical Pregnancy in IVF Is Related to Chromosomal Abnormalities. S. D. Spandorfer, O. K. Davis, I. Kligman, L. I. Barmat, H. C. Liu, A. Kowalik, Z. Rosenwaks. The Center for Reproductive Medicine and Infertility. The New York Hospital-Cornell University Medical Center, New York, NY.

Objective: The fetal loss rates following a documented fetal heart (FH) during a first trimester trimester U/S in spontaneous, non-stimulated conceptions have been shown to be approximately 3% (JAMA 258:2555). To date, no large studies evaluating the outcome of IVF pregnancies after demonstrating a FH have been described. The purpose of this study is determine the fetal loss rate after a documented FH and to evaluate the chromosomal makeup of these losses.

Design: Retrospective chart review

Materials and Methods: 2346 consecutive IVF clinical pregnancies (positive fetal heart) were reviewed. Results of pregnancy outcomes were analyzed by age group. Chromosomal studies when obtained were reviewed. Statistical analysis was accomplished by utilizing the Chi-square test for trend and Student's T test. P values <0.05 were considered significant.

Results: 39 pregnancies were not included in the analysis because these losses were related to amniocentesis complications, elective termination after findings of chromosomal or congenital anomalies, or losses due to incompetent cervix. The overall pregnancy loss rate after demonstrating a FH during a 7 week U/S was 11.31% (261/2307). A highly significant trend demonstrated an increase in fetal loss when comparing the four age groups ($\leq$30 yrs=4.95% vs. 31–34 yrs=9.46% vs. 35–39 yrs=11.57% vs. $\geq$40 yrs=21.28%; $P < 0.0001$). Of the 261 losses in the study period, cytogenetic analysis was obtained on 71 (27.2%). Three specimens were non-diagnostic due to trophoblastic nonproliferation. Only 15 (22.03%) were normal (46XX or 46XY). Of the 53 chromosomally abnormal specimens, 45 (80.4%) were trisomies, 4 (7.14%) had 48 chromosomes, 2 were mosaics (3.57%), 2 were Turner's Syndrome (3.57%), 1 was a translocation (1.79%) and 1 was a triploidy (1.79%). The most common trisomies were 21 (7), 16 (5), 15 (5), 22 (5) and 18 (3). No differences were noted in the average age of the group with normal chromosomal losses as compared to the group with an abnormal chromosomal makeup (37.6 years old vs. 39.4 years old, $P = 0.40$). 91.3% of the losses in women over the age of 40 were chromosomally abnormal as compared to 71.1% of the losses in women under the age of 40 years.

Conclusion: We have demonstrated a highly significant increase in pregnancy loss after demonstrating a FH during a 7 week U/S with increasing maternal age. The overwhelming explanation for these losses appears to be chromosomal in nature with almost 80% having an abnormal chromosomal composition.

O-099

Low Dose Aspirin Treatment Improves Implantation and Pregnancy Rates in IVF Patients: A Prospective, Randomized, Double Blind Study. M. Rubinstein, A. Marazzi and E. Polak de Fried. CER Instituto Medico, Buenos Aires, Argentina.

Objective: Previous studies have reliably demonstrated that low dose aspirin is an effective inhibitor of platelet aggregation and an immunomodulator by the irreversible inhibition of the enzyme cyclooxigenase. Low dose aspirin is widely used in the treatment and prevention of cardiovascular disease, in pregnant patients with preeclampsia and fetal growth retardation and its efficacy has also been proven in women with antiphospholipidic syndrome and recurrent miscarriages. However, it has not been evaluated in the area of assisted reproduction. The aim of this study was to evaluate whether low dose aspirin treatment improves the outcome of IVF cycles.

Design: Prospective, randomized, double blind placebo controlled study.