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OC-13
THE IMPACT OF INTRACELLULAR SPERM CATALASE ACTIVITY ON IN VITRO FERTILIZATION RATES. 
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Reactive oxygen species originating in spermatozoa and leucocytes have been repeatedly reported to exert a negative effect on sperm functions. Catalase activity in sperm has been reported to play a major role in protecting spermatozoa against generation of free radicals. However seminal plasma catalase is removed with semen during the washing procedure prior to IVF. The purpose of the present study was to find out: 1) The association between post washed, processed intracellular catalase activity and sperm count and motility. 2) The impact of intracellular catalase activity on fertilisation in vitro.
Intracellular catalase activity was evaluated in the pellet of 31 centrifugated sperm samples. Catalase activity was quantitated by observing changes in absorbance at 240nm after adding Hydrogen Peroxide. Twenty normospermic and 11 oligospermic patients were evaluated prior to their IVF treatment cycle, using the WHO criteria. Results
Intracellular catalase activity was observed to be 47 ± 6.4 nmol/mg/min and 12.6 ± 2.0 nmol/mg/min in normospermic and oligospermic sperm samples respectively (p<0.05).
In sperm samples with motility > 20% and < 20%, catalase activity was found to be 50.5 ± 9.6 nmol/mg/min and 16.4 ± 4.0 respectively (p<0.05). Correlation between catalase activity and in vitro fertilization rates using Pearson correlation coefficient test was 0.60 (p<0.07). Four pregnancies were achieved in patients with catalase activity within normal range. Conclusions
Intracellular sperm catalase activity is highly correlated to sperm concentration and motility. A trend of improved fertilization and pregnancy rates were observed in vitro.

OC-14
MORPHOMETRIC ANALYSIS IN THE EPIDIDYMIS OF MEN WITH DIFFERENT FORMS OF OBSTRUCTIVE Azoospermia: IS THERE A RELATIONSHIP BETWEEN EPIDIDYMAL MORPHOMETRIC PARAMETERS AND FERTILIZATION RATE 
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In obstructed epididymis, the microsurgically aspirated epididymal sperm (MESA) combined with IVF represents one of the possibilities for many causes of male infertility. The aim of this study was to correlate these data with the fertilization outcome.
OC-15
1H NUCLEAR MAGNETIC RESONANCE (NMR) OF HUMAN SEMINAL PLASMA OF PATIENTS WITH SPERMATOGENIC FAILURE OR OBSTRUCTIVE AZOOSPERMIA 
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Recently, we have shown that the 1H-NMR on human seminal plasma in male infertility evaluation may be used to differentiate spermatogenic failure from obstructive azoosperma. The purpose of this study was to determine whether 1H-NMR analysis of some biochemical markers such as glycerylphosphorylcholine (GPC), choline, citrate, and lactate in human seminal plasma of spermatogenic failure as well as obstructive azoospermia can be of additional value to traditional biochemical analysis in male infertility diagnosis.
Two seminal plasma samples from 58 spermatogenic failure men, 17 obstructive azoosperma were investigated. 1H NMR spectrum, and traditional biochemical analysis were used.

OC-16
PREDICTION OF FERTILIZATION BY ANALYSIS OF CD46 ANTIGEN ON THE INNER ACROSOMAL MEMBRANE
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Design: The purpose of this study was to assess the spontaneous and ionophore induced acrosome reactions immediately prior to oocyte insemination in normal IVF cycles and to correlate the outcome of these reactions with the fertilization outcome. Concomitant other sperm parameters were analyzed by CASA and with strict criteria. The technique as recently published by us, depends upon the binding of the CD46 antibody to the corresponding antigen present only on the inner acrosomal membrane of human sperm.
Expression and detection of the antigenic determinant therefore can only be measured after the sperm has undergone the acrosomal reaction. Assessment of the binding potential was done by flow cytometry enabling analysis of at least 5000 sperm per patient.
Data: In 67 analyzed cycles, 34 had an acrosomal response to ionophore challenge (ARIC) score of > 9 % -- in these cycles a fertilisation rate (FR) of 76.7 % ± 26.5 (SD) was found. When ARIC score was < 9 the FR fell to 3.8 ± 9.4 SD (p < 0.001)
Conclusion: The positive predictive value (PPV) of ARIC > 9 is 0.94, the NPV is 0.84. Specificity is 78.5 and sensitivity 96%. Hence, the technique as described is a powerful tool in prediction of fertilization in IVF patients by detection of sperm unable to undergo acrosome reaction and therefore most likely being more suitable for micro-manipulation.