

## PS1A – POSTER SESSION NR. 1

## POSTER PRESENTATIONS

## MID01

**Impact of pyospermia on sperm dynamic motility parameters and DNA integrity**E. TAHA, A. MOUBASHER, E. MOSSAD AND H. SAYED  
*Assiut University, Assiut, Egypt***Background :** Pyospermia is a common finding in infertile men with controversial issues about its significance.**Objective:** To evaluate effect of pyospermia on computerized semen (CASA) parameters, sperm DNA integrity and chromosomal aneuploidy in infertile men.**Subjects:** The study included 50 infertile men with oligoasthenoteratozoospermia divided into 2 groups according to presence or absence of pyospermia.**Methods:** The study included clinical evaluation, peroxidase stain, CASA, sperm DNA evaluation with acridine orange test and sperm FISH analysis of 18, x and Y chromosomes. Main outcome measure: Comparison between the infertile men with and without pyospermia CASA, sperm DNA fragmentation with acridine orange test and sperm FISH parameters. Also, to correlate between the number of pus cells and these parameters.**Results:** Infertile men with pyospermia had significantly lower sperm progressive and total motility percentages. Also, motility parameters by CASA including curvilinear, straight line and average pathway velocities, straightness, and amplitude of lateral head displacement were significantly lower with pyospermia. Sperm DNA fragmentation index by AOT was significantly higher with pyospermia. Percentages of sperms with diasomy XY and 18 by FISH were higher with pyospermia. These changes in sperm motility parameters and DNA integrity correlated with the number of peroxidase positive leukocytes.**Conclusions:** Pyospermia has a negative impact on sperm motility parameters and DNA integrity regardless infertility as a cofactor.

## MID02

**The influence of environment on the sperm quality: a comprehensive, retrospective, cohort study**D. SANTI<sup>1</sup>, S. VEZZANI<sup>1</sup>, A. R. M. GRANATA<sup>1</sup>, L. ROLI<sup>2</sup>, M. C. DE SANTIS<sup>2</sup>, E. BARALDI<sup>2</sup>, T. TRENTI<sup>2</sup>, M. SETTI<sup>3</sup> AND M. SIMONI<sup>1</sup><sup>1</sup>*Unit of Endocrinology, Modena, Italy;* <sup>2</sup>*Laboratory, Modena, Italy;* <sup>3</sup>*Clinic Engignering, Modena, Italy***Background:** Several studies proposed a relationship between environmental factors and semen quality. In particular, the negative effect of air pollution on spermatogenesis and gonadal function is currently suggested. However, no specific studies evaluated the environmental influence on semen quality in a specific geographical area and time frame.**Aim:** The aim of this study was the assessment of the relationship of both air pollution and environmental parameters with quality-related sperm variables, during the

coldest months of the year characterized by the most polluted air.

**Methods:** A retrospective, observational, cohort study was carried out in the province of Modena, located in the Emilia-Romagna region of Northern Italy. Semen analyses, environmental temperature, air humidity and air particulate matter (PM) measurements from the 1st of November, 2014 to the 19th of February, 2015 were acquired to the first database. A second, wider database was arranged, evaluating environmental exposure in the 3 months before semen collection (from August 1st 2014). All data included in the database were registered by geo-coding the residential address of the patients and the site of registration of environmental factors. The geo-codification of parameters was performed using Fusion Tables of Google available at <https://www.google.com/fusiontables/data?dsrclid=implicit>, considering the exact time of measurement.**Results:** Average air temperature was inversely related to sperm concentration and to total sperm number ( $p < 0.001$ ). Semen volume was inversely related only to the minimum ( $p < 0.001$ ) and not to maximum recorded temperature ( $p = 0.110$ ). Air humidity was not related to sperm quantity and quality. PM<sub>2.5</sub> was directly related to total sperm number ( $p < 0.001$ ). PM<sub>10</sub> was directly related to both semen volume ( $0 < 0.001$ ) and typical forms ( $p < 0.001$ ), inversely related to atypical forms ( $p < 0.001$ ), and related neither to sperm concentration ( $p = 0.430$ ) nor to sperm motility. The extended analyses considering environmental parameters in the 3 months before semen collection, confirmed the relationship between air temperature and sperm quantity, whereas no influence was found between PM and sperm quality.**Conclusion:** We found an influence of environmental temperature on semen quantity, without a clear effect of air pollution, as assessed through PM<sub>10</sub> levels, on sperm parameters variations. Environmental temperature and humidity seem to not affect semen quality, although a wider bigdata approach could better explain this relationship.

## MID03

**Effect of Sperm DNA fragmentation on the clinical outcomes for couples with unexplained infertility undergoing in vitro fertilization**D. V. M. CARBALLO<sup>1</sup>, A. KABLY AMBE<sup>1</sup>, A. M. ROQUE SANCHEZ<sup>2</sup>, L. A. DURAN MONTERROSAS<sup>2</sup> AND Y. S. LOPEZ GONZALEZ<sup>2</sup><sup>1</sup>*E.C.M, CEPAM, Huixquilucan, Mexico;* <sup>2</sup>*CEPAM, Huixquilucan, Mexico*

Topic Male infertility-diagnosis

**Keywords:** DNA fragmentation, in vitro fertilization, male infertility**Background:** Sperm analysis is the cornerstone in male factor study, however it is not enough to predict fertility, leading to the need of additional tests. One of these, is the sperm DNA fragmentation index (DFI) which evaluates sperm DNA integrity. A DFI > 15% has been associated with worse prognosis for fertilization and pregnancy rates, blastocyst development and pregnancy loss. Some studies have