

PS1A – POSTER SESSION NR. 1

POSTER PRESENTATIONS

MID01

Impact of pyospermia on sperm dynamic motility parameters and DNA integrityE. 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 studyD. SANTI¹, S. VEZZANI¹, A. R. M. GRANATA¹, L. ROLI², M. C. DE SANTIS², E. BARALDI², T. TRENTI², M. SETTI³ AND M. SIMONI¹¹Unit of Endocrinology, Modena, Italy; ²Laboratory, Modena, Italy; ³Clinic 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?dsrcid=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. PM2.5 was directly related to total sperm number ($p < 0.001$). PM10 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 PM10 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 fertilizationD. V. M. CARBALLO¹, A. KABLY AMBE¹, A. M. ROQUE SANCHEZ², L. A. DURAN MONTERROSAS² AND Y. S. LOPEZ GONZALEZ²¹E.C.M, CEPAM, Huixquilucan, Mexico; ²CEPAM, 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

SD21

Erectile dysfunction is common among men with acromegaly and is associated with morbidities related to the disease

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Background: The prevalence of erectile dysfunction (ED) and its correlates in men with acromegaly has never been investigated.

Aim: To evaluate sexual function in men with acromegaly.

Methods: Multicenter-based, retrospective analysis of a non-selected series of 57 acromegalic subjects (mean age: 52.7 ± 14.2 years) was performed. Acromegalic subjects reporting ED ($n = 24$) were compared with matched ED-patients without acromegaly or pituitary disease (controls), selected from a cohort of more than 4000 subjects enrolled in the Florence Sexual Medicine and Andrology Unit. Patients were interviewed using SIEDY structured interview, a 13-item tool for the assessment of ED-related morbidities. Several clinical and biochemical parameters were taken. Penile colour-Doppler ultrasound (PCDU) was performed in a subgroup of 37 acromegalic subjects.

Results: ED was reported by 42.1% of acromegalic subjects. After adjusting for age and testosterone, acromegalic subjects with ED had a higher prevalence of hypertension, and more often reported an impairment of sleep-related erections and a longer smoking habit. Accordingly, acromegaly-associated ED was characterized by a higher organic component and worse PCDU parameters. No relationship between ED and testosterone levels or other acromegaly-related parameters was found. However, acromegalic subjects with severe ED reported a longer disease duration. In a case-control analysis, comparing acromegalic subjects with ED-matched-controls free from acromegaly (1:5 ratio), acromegalic men had a worse ED problem and a higher organic component of ED, as derived from SIEDY score. In line with these data, acromegalic patients with ED had a higher prevalence of major adverse cardiovascular events (MACE) history at enrolment and lower PCDU parameters.

Conclusions: Subjects with complicated acromegaly are at an increased risk of developing ED, especially those with cardiovascular morbidities. Our data suggest including a sexual function evaluation in routine acromegaly follow-up.

SD22

High triglycerides predicts arteriogenic erectile dysfunction and major adverse cardiovascular events in subjects with sexual dysfunction

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Background: The atherogenic role of triglycerides (TG) remains controversial.

Aim: To analyse the contribution of TG in the pathogenesis of erectile dysfunction (ED) and to verify the value of elevated TG in predicting major adverse cardiovascular events (MACE).

Methods: An unselected series of 3990 attending our outpatient clinic for sexual dysfunction was retrospectively studied. A subset of this sample ($n = 1687$) was enrolled in a longitudinal study. Several clinical, biochemical and instrumental (penile color doppler ultrasound; PCDU) factors were evaluated.

Results: Among patients studied, after adjustment for confounders, higher TG levels were associated with arteriogenic ED and higher risk of clinical and biochemical hypogonadism. Conversely, no association between TG and other sexual dysfunctions was observed. When pathological PCDU parameters, including flaccid acceleration ($<1.17 \text{ m/s}^2$) or dynamic peak systolic velocity (PSV $<35 \text{ cm/s}$), were considered, the negative association between impaired penile flow and higher TG levels was confirmed, even when subjects taking lipid-lowering drugs or those with diabetes were excluded from the analysis (OR = 6.343[1.243;32.362], $p = 0.026$ and 3.576 [1.104;11.578]; $p = 0.34$ for impaired acceleration and PSV, respectively). Similarly, TG levels were associated with a higher of risk hypogonadism, independent of the criteria used for the definition, when the same adjusted model was applied (OR = 2.892[1.643;5.410], $p < 0.0001$ and 4.853[1.965;11.990]; $p = 0.001$ for total $T < 12$ and 8 nm, respectively). In the longitudinal study, after adjusting for confounders, elevated TG levels (IV quartile: 162–1686 mg/dL) were independently associated with a higher incidence of MACE (HR = 2.469[1.019;5.981]; $p = 0.045$) when compared to the rest of the sample.

Conclusions: Our data indicate that TG play an independent role in the pathogenesis of arteriogenic ED in the ED cardiovascular (CV) risk stratification. Whether or not the use of TG lowering drugs might improve ED and its CV risk must be confirmed through specific trials.