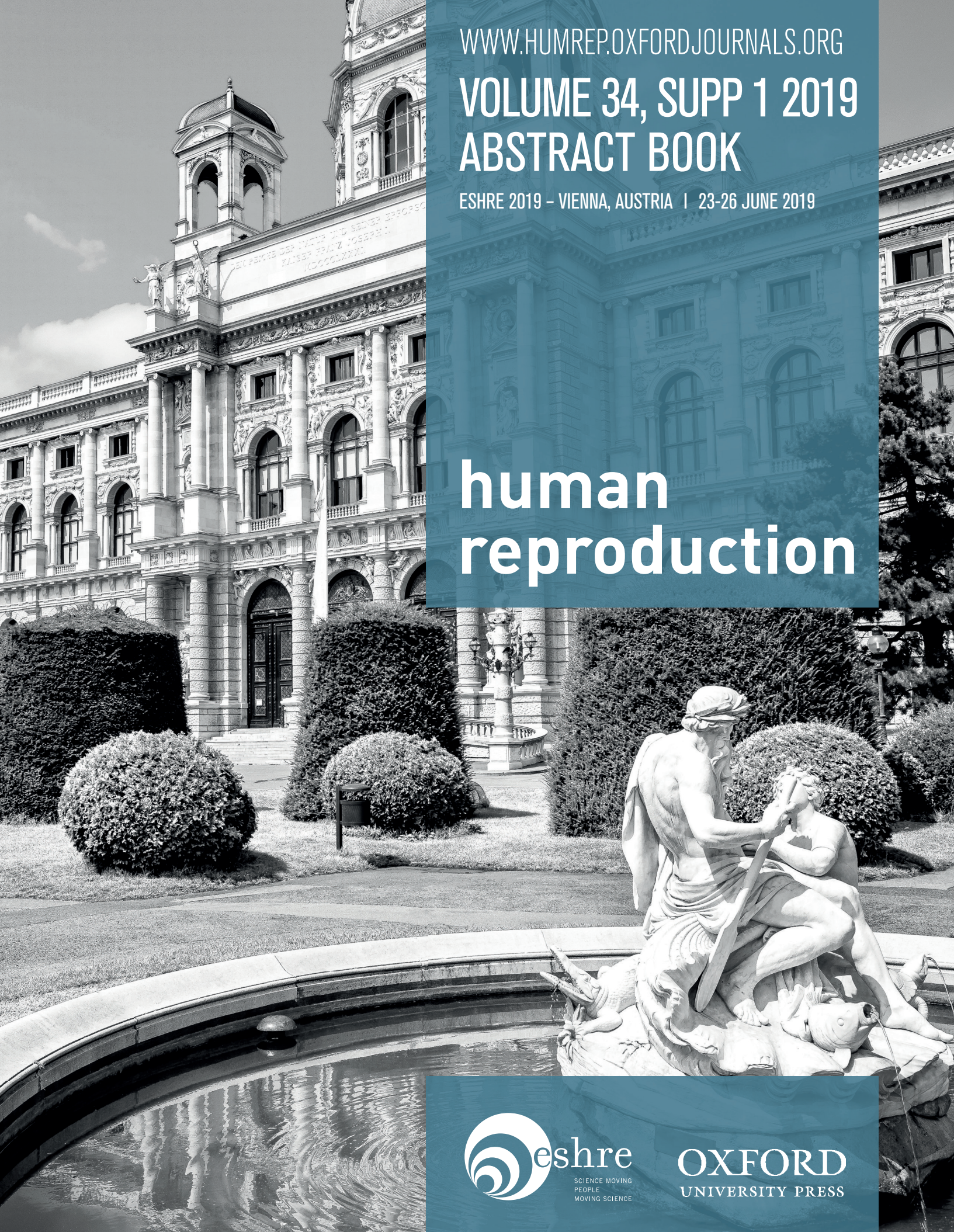

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24 to 26 June 2019

Abstracts

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European Society of
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ORAL PRESENTATIONS

Monday, 24 June 2019

(*continued overleaf*)

Tuesday, 25 June 2019

Wednesday, 26 June 2019

- **INVITED SESSIONS**
- **SELECTED ORAL COMMUNICATION SESSIONS**

addition, a positive significant correlation between STL and total sperm count was observed only in normozoospermic patients (n=33, r=0.361, p=0.039). Sperm concentration may be affected by short STL due to induced apoptosis when STL reaches a critical point. However, altered seminal parameters erase this correlation, indicating that sperm concentration can be altered independently of STL. The present results thus suggest that although STL cannot be considered a general indicator of sperm quality, it might have a biological significance.

Limitations, reasons for caution: Additional studies with an increased sample size in the different clinical groups will help to validate the present statistical results.

Wider implications of the findings: Our study clarifies that different sperm sample characteristics may lead to discrepant results when evaluating the importance of STL in male infertility. We conclude that STL is not a suitable biomarker of sperm quality. However, given the importance of telomeres in reproduction, STL may still be associated with treatment prognosis.

Trial registration number: not applicable.

P-087 Abnormal sperm mitochondrial membrane potential in "normozoospermic WHO patients": outcome in ICSI patients

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Study question: Is abnormal sperm mitochondrial membrane potential (MMP) at Andrositol Test (AT) related to ICSI outcome in infertile couples presenting normozoospermia according to WHO, 2010 parameters?

Summary answer: In infertile ICSI couples presenting normozoospermia by WHO, 2010 parameters, abortion rate was found to be significantly higher in "abnormal" than in "normal" AT group.

What is known already: Poor sperm motility and morphology according to WHO parameters, interfere with fertilization and ICSI outcomes. "Idiopathic male infertility" in WHO normozospermia still represents a difficult area where complex and expensive tests have been proposed. Andrositol® Test (Lo.Li. Pharma) is a simple and economic diagnostic procedure capable to qualitatively evaluate sperm MMP ("normal", "medium" and "poor") and allows to identify subfertile normozoospermic patients.

Study design, size, duration: The study is a retrospective review of semen samples investigated in 39 infertile couples undergoing ICSI over a 16 months period.

Participants/materials, setting, methods: 39 sperm samples with "normal" (WHO, 2010) sperm parameters from couples with "tubal factor" undergoing ICSI treatment, in a private fertility clinic, were analyzed by AT. Two groups were identified: group A, with "normal" AT and group B with "abnormal" AT. No differences were present in clinical parameters, stimulation and laboratory figures. Implantation, pregnancy and abortion rates were calculated.

Main results and the role of chance: Implantation and pregnancy rates were similar, on the contrary, abortion rate was found to be significantly higher (33%) in "abnormal" AT group (Group B) than in "normal" AT group (Group A) (16%). Since the clinical and laboratory parameters were similar in both groups, the increased abortion rate in Group B could be tentatively attributed to a post blastocyst negative factor related to abnormal sperm MMP.

Limitations, reasons for caution: Retrospective design and small sample size limit our results.

Wider implications of the findings: Whether confirmed in future studies, inositol supplementation should be considered, in vivo or in vitro, in male patients undergoing ICSI techniques presenting "abnormal" AT.

Trial registration number: The protocol was approved by the local Institutional Review Board.

P-088 Sperm p53 concentration: a potential new biomarker for environmental pollution. Preliminary data.(EcoFoodFertility Project).

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Study question: We evaluated the p53 protein concentration in sperm cells to test whether environmental pollution can affect expression levels of this protein.

Summary answer: We found a significant difference in p53 levels between two homogeneous groups by age and lifestyle, residents in two areas with different environmental impact.

What is known already: The World Health Organization (WHO) has placed among its priority objectives the understanding of the relationships between the sources of pollution and the effects on human health, which they represent a cause of surprisingly high mortality and morbidity.

International scientific literature shows that strong environmental impact may jeopardize the stability and integrity of cellular DNA. This impairment can affect cellular functions, such as the uncontrolled growth of cells with the development of neoplastic process, until the final process of cell death (apoptosis). P53 seems to play a key role in these mechanisms, as it coordinates cell fate.

Study design, size, duration: 237 healthy males, 18-36 years old, were observed according to their stable residence in low environmental impact area (LEIA) or High environmental impact area (HEIA) of the Campania region (Southern Italy) in a period between July 2014 and June 2018. The study group has been divided into Group A: 109 permanent residents in LEIA, aged 19 - 36 years; Group B: 128 permanent residents in HEIA, aged 18 - 35 years.

Participants/materials, setting, methods: All partecipants were no smokers, not habitual alcohol drinkers, no professionally exposed to environmental pollutants, without varicoceles, prostatitis, urethritis or chronic diseases. Semen analysis was assessed according standard criteria of WHO Manual, fifth edition (2010). All semen samples were examined 30 minutes after collection and immediately processed for the p53 protein assay, using ELISA test, proposed by Raimondo et al. (2010)[1]. Quantitative dosage of p53 protein was expressed in ng / million of spermatozoa.

Main results and the role of chance: We have observed not significant differences in ejaculate volume between group A and group B. About sperm concentration, 44,9% (40/109) of group A samples were normozoospermic while only 20,3% (26/128) of group B samples were normozoospermic. The quantitative dosage of p53 protein has been corrected in relation to sperm concentration number and shows statistically significant differences between two groups: group A had a minimum value of 0,29 ng/million of sperms and a maximum value of 4,05 ng/million of sperms, with a mean value of 1,74 ng/million of sperms; group B had a minimum value of 0,69 ng/million of sperms and a maximum value of 14,36 ng/ million of sperms, with a mean value of 6,45 ng/million of sperms.Statistical analysis of the two groups was performed using Fisher's correlation and then Student's test and we obtained a $p < 0.0005$.The differences observed in this study underlines the efficacy of quantitative dosage of p53 protein in identify a cell suffering due to environmental pollution.

Limitations, reasons for caution: This is a preliminary observational study on a small number of samples. Reasons for caution could be due to unknown confounding factors.A large number of tests are need to confirm our results.

Wider implications of the findings: p53 protein is well known as "guardian of the genome" for its key role in determining the fate of the cell following DNA damage. Quantitative dosage of p53, seems to give valuable informations on the degree of damage to sperm DNA by environmental pollution, suggesting it as potential new biomarker.

Trial registration number: it's a retrospective observational study.