

First digital world congress of andrologists ends with an appeal:

Reevaluate fertility as a window to man's health

Muenster, Germany. Participants from Argentina, Australia, Canada, China, Russia, the USA or Europe: More than 700 andrologists around the world have taken part in the online premiere of the world's largest andrology congress. From December 5 to 9, 2020, the International Society of Andrology (ISA), the European Academy of Andrology (EAA) and the German Society for Andrology (DGA) united for the first time for one scientific conference. Under the direction of the two congress presidents Prof. Dr. med. Sabine Kliesch, Chief Physician of the Department for Clinical and Operative Andrology, Center for Reproductive Medicine and Andrology (CeRA) at the University Münster and Univ.-Prof. Dr. rer. nat. Stefan Schlatt, Director of CeRA, University Münster organized the virtual event with a unique focus on andrological themes. One of the most important messages from Andrology 2020 concerns infertile men. Infertility is associated with high risks of other comorbidities.

"The andrological societies had a dream of a global face-to-face congress. Despite the corona pandemic we made it a virtual reality after 10,000 of e-mails and hundreds of zoom conferences," is the final statement of the two organizers. During the congress, 200 to 300 participants were permanently online. "In the pandemic situation, the digital format was perfect to gain insight into the latest research and clinical developments and to strengthen andrological competence in research and patient care worldwide." Both conference presidents hope for a stimulating effect for the future of andrology with the aim to improve specifically the health of the male population.

Andrology 2020 reported a number of clinical highlights: The connection between testosterone deficiency and increased mortality has been confirmed in studies underlining the need to treat hypogonadism. "Above all, we have to reassess male fertility and view it as an indicator of men's health and advise our patients accordingly," says Congress and DGA President Kliesch. "We now know that fertility is a window on man's health and that severely infertile men develop concomitant diseases much more frequently in later life affecting their life expectancy." According to epidemiological studies, the so-called OAT syndrome leads to an increased risk of tumor and cardiovascular diseases. Affected men have too few, insufficiently mobile and more malformed sperm. The risk of germ cell tumors is 2-3 times higher, the risk of prostate cancer is 1.7 times higher, and the risk of hospitalization for cardiovascular disease increases with decreasing sperm counts.

In regard to germ cell tumors, there is an increasing importance of genetic predisposition and environmental factors. In diagnostics, new "miRNAs" are in some cases superior to classic tumor markers (AFP, hCG, LDH).

The social component of men's health is illustrated by unpublished data. According to the Asian Male Health Report, unmarried men are 3 times more likely to develop cardiovascular disease. Marriage reduces the risk of cardiovascular disease by 46%, while a low income doubles the rate of ischemic heart disease.

On the subject of infertility the past president of the DGA, Prof. Dr. Hermann M. Behre notes that it is of central importance to always focus on the infertile couple and to examine both partners. The time factor should not be underestimated. Despite great advances in assisted reproduction with pregnancy rates of up to 80% after four treatment cycles, the age of the woman remains decisive for the success rate. Studies have shown that women are on average 35.5 years old at the time of artificial insemination. Then the pregnancy rate is only 35%. It is therefore increasingly important to develop new sperm function tests that find their way from basic research to clinical application and

make functional disorders visible at the cellular level. This is considered a big leap forward for the treatment of the infertile couple.

The corona virus enforced research also in andrology: first studies have already revealed a connection between testosterone and COVID-19 disease. Interestingly a 95% favorable course of the disease is to be expected if the testosterone value is above 5 nmol / l during hospitalization. In contrast, a testosterone decrease of just 1 nmol / l below this threshold associates with a 42% higher risk of an unfavorable course of the disease. It is currently unclear whether the expression of the virus receptors allowing easily docking in the testes will actually have effects on fertility.

After more than 300 lectures and presentations and smooth technical performance the conference presidents Prof. Kliesch and Prof. Schlatt thanked the andrological community, which made Andrology 2020 a great success with their participation.

The following scientific prizes were awarded by the German Society for Andrology (DGA) as part of Andrology 2020.

Andrology Award 2019 (given by EAA)

Daniele Gianfrilli, Rom, Italy

„Risk behaviours and alcohol in adolescence are negatively associated with testicular volume – results from the Amico-Andrologo survey“

Poster-Awards of the DGA:

Lucas GA Ferreira, Sao Paulo, Brasil

„TLR4/NFKB signaling pathway regulates epididymal embryonic development“

Meritxell Jodar, Barcelona, Spaine

„Unique features of human sperm circular RNAs /circRNAs)

Francesco Lotti, Florenz, Italy

„Clinical and psychological characteristics of men with primary and secondary couple infertility“

Sophie Kaldewey, Münster, Germany

„Does the FSHB c.-211G>T polymorphism impact the spermatogenic potential in infertile male patients?“

Oral Lecture Awards of DGA:

Sharma Swati, Münster, Germany

„Developing testes-on-chip model to study in vitro primate spermatogenesis and endocrine dynamics“

Whiley Penny, Clayton, Australia

„Activin A modulates the pace of germ cell development at the onset of spermatogenesis“

Valeria Hasenmajer, Rom, Italy

„Sexual function in adrenal insufficiency: data from the DREAM trial cohort“

Sabine Kappes, Münster, Germany

„Does the sperm retrieval rate (SRR) result of a small test sample reliably predict the SRR on the day of ICSI?“

Publication Award of DGA:

Margot J. Wyrwoll, Münster, Germany

„Bi-allelic Mutations in M1AP are a frequent cause of meiotic arrest and severely impaired spermatogenesis leading to male infertility“