

New focus on male factors critical for success in human fertility treatment

SINGAPORE: The adverse impact of male factors in assisted reproductive treatments was brought into a clear and disturbing focus at the 10th Congress of the Asia Pacific Initiative on Reproduction (ASPIRE) today.

The ASPIRE Congress, originally to be held in the Philippines, is being presented in virtual format – <https://aspire2021.cme-congresses.com> – to on-line participants in more than 100 countries because of ongoing concerns about COVID-19.

Professor Peter Schlegel from the Centre of Reproductive Medicine at New York's Weill Cornell Medical College, today cast new light on sperm quality, the source of sperm for assisted conception – either from testicular, epididymal or ejaculate – male obesity and paternal age in the success of fertility treatment.

He said knowledge about assisted conception was most often closely related to female factors, but the effects of male infertility had not been considered to the same extent. Globally, one in six couples experience infertility, which is defined as the failure to conceive after a year of unprotected intercourse, or the inability to carry pregnancies to a live birth.

“With increasing investigation and experience, it is now recognised that male factor issues can have substantial effects on assisted reproduction outcomes,” Professor Schlegel said.

He said sperm defects, including DNA fragmentation, affected multiple levels of reproductive function including fertilisation, embryo development, implantation and maintenance of pregnancy.

“Intra-cytoplasmic, or single sperm injection in an egg for fertilisation, known as ICSI, is widely practised in assisted reproduction, and it has substantially overcome limitations in sperm numbers, motility and morphology in many men. But some sperm factors still affect the chances of fertilisation and pregnancy.

“Sperm DNA fragmentation often occurs after leaving the testis due to obstructions, injury or medication use. One major study among couples who underwent repeat IVF cycles showed a clinical pregnancy rate of 28 per cent from testicular sourced sperm compared with 10 per cent for ejaculated sperm.”

In his ASPIRE presentation, Professor Schlegel addressed research findings relating to male obesity and paternal age.

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“Male obesity – independent of female weight or other identifiable factors – significantly reduces clinical pregnancy and live birth rates in assisted reproductive technology,” he said.

He said a meta analysis of major studies to date showed this outcome progressively from normal male weight to being overweight, obese and morbidly obese.

Paternal age can substantially affect the health of offspring as well as having a role in IVF results. Although he noted variability from different studies, Professor Schlegel highlighted one major study that showed a two-fold increased risk of failed conception in assisted reproduction when the male partner was aged 40-plus.

“Increased male age, especially over 40 years, is associated with up to 40 per cent increase in miscarriage risk and other adverse outcomes including birth defects, childhood cancer, autism and schizophrenia,” he explained.

The ASPIRE Congress was also told that reducing the length of abstinence for sperm analysis for IVF treatment actually improved semen quality, clinical pregnancy and live birth rates.

“Longer abstinence is associated with increased sperm DNA fragmentation and lower pregnancy rates after IVF,” Professor Schlegel said.

“Multiple identifiable male factors, some of which can be treated, can adversely affect the success of assisted reproductive technology. Knowledge of these conditions is vitally important for effective reproductive care.”

FURTHER INFORMATION:

Professor Peter Schlegel is a Past President of the American Society for Reproductive Medicine. He is available for interview.

To arrange an interview, please contact Trevor Gill, ASPIRE 2021 Media Relations.
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