

CAPA-IVM a promising advance in assisted reproduction for women with PCOS

SINGAPORE: The first births and on-going well-being of babies born from an advanced assisted reproduction process called CAPA in-vitro oocyte maturation, or IVM, has highlighted the potential of the procedure for millions of women with complex fertility issues including polycystic ovarian syndrome (PCOS).

IVM is a technique to obtain oocytes that are developed in vitro prior to fertilisation with sperm in a laboratory with an embryo transferred back into a patient's uterus with the aim of an ongoing pregnancy and live birth.

A major benefit of IVM is that it requires minimal hormonal stimulation of the ovaries that is a standard protocol in traditional IVF. Hormonal stimulation in IVF can cause a debilitating and potentially life-threatening condition known as ovarian hyperstimulation syndrome, or OHSS, in women with PCOS.

IVM is also an option for women of reproductive age facing cancer treatment because conventional IVF hormone treatment can also stimulate cancer cells in estrogen-sensitive cancers.

CAPA-IVM is a relatively new protocol using an advanced culture medium that improves the in vitro development of immature oocytes potentially resulting in a higher number of quality embryos per patient.

At the 10th Congress of the Asia Pacific Initiative on Reproduction (ASPIRE), the latest data on CAPA-IVM births and the health of babies born from the protocol has been presented with encouraging outlooks.

ASPIRE is a unique task force of clinicians and scientists involved in the management of fertility and assisted reproductive technology (ART) throughout the Asia Pacific region. The ASPIRE Congress is being presented in virtual format – <https://aspire2021.cme-congresses.com> – to fertility specialists in over 100 countries.

Associate Professor Dr Lan N Vuong, a pioneer in assisted reproduction in Vietnam and Head of the Department of Obstetrics and Gynaecology at the University of Medicine and Pharmacy at Ho Chi Minh City, said several variants of IVM had been used successfully as an alternative to standard IVF in different patients groups with variable success rates.

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However, she said IVM had not gained widespread acceptance even though it avoids or minimises controlled ovarian stimulation, reduces medication costs and results in shorter treatment periods with improved psychological burden on patients.

“The most important and relatively recent advance in IVM technology is the CAPA-IVM protocol using a new compound to facilitate oocyte and embryo competence.

“Our group at the My Duc Hospital in Ho Chi Minh City recently reported the first live births resulting from CAPA-IVM with a clinical pregnancy rate per embryo transfer of 63.2 per cent compared with 38.5 per cent from standard IVM.

“The live birth rate per embryo transfer was not statistically different between the CAPA-IVM and standard IVM groups, birth weights were similar in the two treatment groups and there were no reported malformations.”

Dr Vuong’s group has also undertaken the first large randomised control trial comparing the fertility, obstetrics and neonatal outcomes of CAPA-IVM and conventional IVF with no significant differences in obstetric outcomes including gestational age at delivery.

“There is a current and continuing focus on the health and development of babies born from this technology, but the American Society of Reproductive Medicine recently reported that IVM is no longer considered experimental,” she said.

“We therefore consider that CAPA-IVM could improve outcomes for particular groups of women, including those with PCOS, who are seeking treatment for infertility.”

Interview: To arrange an interview with Dr Lan N Vuong please contact Trevor Gill, ASPIRE Media Relations on lighthousepr@adelaide.on.net