

Benefits from freeze-all embryo strategy in older IVF patients

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Conventional IVF protocols involve the transfer of a fresh embryo to the uterus during the same cycle in which the eggs were collected and freezing extra embryos for future use. A novel approach to improving IVF outcomes has recently emerged in which all embryos generated from an egg collection cycle are electively frozen and transferred in a subsequent cycle. This "freeze-all" approach, initially developed as a strategy for minimising risk of ovarian hyperstimulation syndrome (OHSS) in high risk patients, also addresses concerns that some have raised that the drugs used for ovarian stimulation during IVF may have a negative impact on the uterine receptivity of some patients. In theory, therefore, waiting until a later "natural" cycle for embryo transfer should improve outcomes in these patients; however, evidence supporting this claim is limited.

Today, a study presented at the Annual Meeting of ESHRE provides strong evidence that freeze-all protocols are indeed associated with significantly improved IVF outcomes—especially in women over 35, a patient group rapidly becoming the largest and most challenging category of infertility patient. The results of the study were presented in Helsinki by Dr Karen Hunter Cohn from Celmatix, a US company working in fertility and women's health.

The study examined more than 16,000 IVF treatment cycles performed at 12 leading fertility centres in the USA. After matching for patient age and other variables (including preimplantation genetic screening) analysis showed that freeze-all IVF was significantly associated with improved ongoing pregnancy rates in [patients](#) over 35 years old (46% in freeze-all vs 33% in fresh cycles).

There was also a benefit found in patients with elevated progesterone levels prior to egg retrieval - and this was evident whether they were younger than 35 (47% freeze-all vs 38% fresh) or older than 35 (45% freeze-all vs 30% fresh). However, a

diagnosis of polycystic ovarian syndrome, endometriosis, tubal disease, or unexplained infertility had no significant impact on the effect of freeze-all transfers.

One of the study's clinical investigators, Dr Eric Widra from Shady Grove Fertility in Washington DC, USA, acknowledged that interest in a freeze-all approach to IVF is growing, but not yet with broad application. "There are several reasons clinics do freeze-all cycles," he said. "These include patients at high risk for OHSS, patients having preimplantation genetic diagnosis prior to embryo transfer, and importantly, those patients who have a premature rise in the concentration of progesterone hormone prior to egg retrieval. Several studies have shown that this rise in progesterone is associated with a lower pregnancy rate after fresh embryo transfer.

"A few centres are doing freeze-all with all patients, though here at Shady Grove it's only in the above categories. The evidence of this study is intriguing, but without prospective randomisation, we cannot yet conclude that this is an effective strategy for any group of patients."

More information: Abstract O-239, Wednesday 6 July 2016, 11.30: Multi-center study demonstrates freeze-all IVF protocols are correlated with higher ongoing pregnancy rates in women of advanced maternal age

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