

No benefit in IVF from routinely freezing all embryos before transfer

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An IVF technique which freezes all embryos generated in an initial treatment cycle and transfers them in a later cycle as freeze-thawed embryos does not improve outcome as some studies have suggested.

Results of the study, performed at the Instituto Valenciano de Infertilidad (IVI) clinic in Valencia, Spain, are presented today at the ESHRE Annual Meeting by Dr Ernesto Bosch, Medical Director of IVI Valencia, Spain.

As background to his report, Dr Bosch noted that several studies have found improved outcomes in IVF when all embryos are electively frozen for later transfer. It has been claimed that this freeze-all approach avoids embryo transfer in the fresh stimulation cycle and thus any adverse effects which ovarian stimulation has on the uterine environment and embryo implantation.

Thus, said Dr Bosch, if endometrial receptivity is indeed diminished during ovarian stimulation, transferring the embryo in a delayed cycle - in which the uterus has not been exposed to supra-physiological doses of reproductive hormones - would appear a reasonable solution.

However, this large Spanish study found no evidence that routinely freezing all embryos and delaying transfer to a subsequent cycle improves IVF outcome in terms of ongoing pregnancy or live birth rates in women with a normal response to ovarian stimulation.

The study included 882 patients having a first or second cycle of IVF at the IVI clinic in Valencia; 364 of them (41%) had [embryo transfer](#) in the initial fresh cycle, and 518 (59%) agreed to have all [embryos](#) frozen for later transfer. When the outcomes were compared, no differences were observed between ongoing pregnancy rate and live birth rate (36.2% freeze-all vs 33.8% fresh). When adjustments were made for patient age and other variables likely to affect results, there was still no evidence of any impact of freezing. All patients in the study were considered "normal responders" and were thus representative of a routine IVF patient population.

"These findings," said Dr Bosch, "do not support a change in IVF practice moving to a freeze-all strategy in normo-responders in IVF." He further noted that treatment cost and time to pregnancy are both lower in fresh embryo transfers.

However, he noted that there is still good evidence that a freeze-all approach lowers (even removes) the small risk of ovarian hyperstimulation syndrome (OHSS) in IVF, which is increased following conception, but any further benefit in terms of outcome, said Dr Bosch, would need the strong evidence of a randomised trial before a change in policy might be considered.

"Most studies so far," explained Dr Bosch, "have included patients who are high responders to ovarian stimulation with high steroid levels at the end of the follicular phase. These high levels of hormone have been shown to impair the receptivity of the uterus to [embryo implantation](#), and this may explain why these studies have shown a benefit in outcome."

He added that some clinics appear to have introduced freeze-all policies in their routine IVF, but the number is unknown. This study would suggest that there is no outcome benefit in such a strategy in patients

who respond normally to [ovarian stimulation](#), but Dr Bosch did emphasise the safety of such an approach in high responders. "We did not include high responders in our study," he said, "and for them we still recommend a freeze-all strategy for preventing both early and late OHSS."

More information: Abstract O-162, Wednesday 17 June, Elective frozen embryo transfer does not improve reproductive outcome in norm0-responder patients

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