Take your time

Embryo transfer is widely considered to be "one of the most critical steps in the process of in vitro fertilization" (1). Because of the importance of this procedure, the techniques and practices associated with all aspects of it have been dissected in the infertility literature. Many factors that may affect the likelihood of a successful transfer have been evaluated, including the cervical preparatory process, the type of catheter used, the presence of blood or mucus in the catheter, and the location of placement of embryo(s) in the uterus.

Past studies have suggested that longer transfer times were associated with lower pregnancy rates (2, 3). In this issue, Lee et al. should be commended for reevaluating these data in the controlled setting of frozen-embryo transfer cycles, which controls for many of the confounders in previous studies (4).

Lee et al.'s study evaluated transfer time in programmed frozen-embryo transfer cycles with uniform hormonal preparation. All were slow frozen–thawed blastocyst transfers performed with ultrasound guidance and benzodiazepine pretreatment. Consistently with past studies, transfer time was defined as time from when the catheter was loaded until the embryo(s) was(were) expelled into the uterine cavity.

Among their patient population, the authors did not find that the mean duration of embryo transfers differed between those who had clinical pregnancies and those who did not. When the study cohort was divided into tertiles by transfer time, clinical pregnancy rates and implantation rates were similar among tertiles. In multivariate analysis, while controlling for factors previously associated with lower pregnancy rates (such as blood in the catheter or difficult mock transfer), shorter transfer time was not associated with improved pregnancy rates (5). The authors did not evaluate patients' subjective experience, such as discomfort, during the transfers.

The authors did acknowledge that the highest tertile of their analysis accounted for a relatively wide range of transfer times (82–582 s). Within the wide range of this tertile (close to 10 minutes could seem an eternity to patients and providers), there may have been a nonsignificant trend toward lower pregnancy rates when embryo transfers exceeded 120 or 180 s. However, the study was inadequately powered to evaluate this time range separately, and appropriately the authors do not conclude that there is a strict time threshold above which pregnancy rates decline.

If nothing else, Lee et al.'s report should provide reassurance to providers, embryologists, and patients. Given the significance of the embryo-transfer procedure, an embryo transfer that lasts relatively longer can be anxiety provoking for all involved. This can be especially problematic for physicians in training or new in practice, who may feel pressure to perform an embryo transfer with ease and minimal delay.

This study suggests that it is likely not the duration of the embryo transfer procedure alone that is problematic, but rather other events that can occur with a difficult transfer (such as trauma to tissue that can result in blood in or outside the catheter). It is a reminder to avoid forcing a catheter into position. Rather, providers can be patient in attempts to gently navigate an embryo-transfer catheter through what can be tortuous cervical anatomy. In this modern age of schedule pressures and the importance attached to perceptions, Lee et al.'s study suggests that, with the valued procedure of the embryo transfer, it is perfectly acceptable to take your time.

Kate D. Schoyer, M.D.
Department of Obstetrics and Gynecology, Medical College of Wisconsin, Milwaukee, Wisconsin

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