

Egyptian Fertility Sterility Society

The 17th Editorials

After an IVF cycle cancellation, does changing the stimulation protocol affect the odds of live birth and recurrent cancellation in the subsequent cycle?

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What is known already?

In 2019, a total of 13 319 autologous IVF cycles with intended retrievals (about 10%) were cancelled before the egg retrieval step. [1] Centers for Disease Control and Prevention, 2021). Reasons for cycle cancellation are varied and include poor follicle production, over-response to ovarian stimulation, concurrent illness, and withdrawal from treatment for personal, financial, or other reasons (Society for Assisted Reproductive Technology (SART) National Summary Report 2019, 2022). [2]

Low response to ovarian stimulation is by far the most common reason for cancelled cycles, but little is known about live birth rates (LBR) or patient characteristics that may predict success in subsequent cycles.

Prior studies looking at subsequent cycles after IVF cycle cancellation are small and do not examine demographic variables that might contribute to future live births or repeated failures (Kailasam et al., 2004; [3] Nicopoullos and Abdalla, 2011 [4]

Specifically considering modifiable variables that may contribute to future cycle success, prior studies looking at the effect of changing the stimulation protocol after IVF cycle cancellations use varying definitions

of cycle cancellation and often do not look at the outcome of live birth (Sunkara et al., 2014 [5]; Xu et al., 2018;[6] Wald et al., 2021[7]).

What is New?

A recent retrospective cohort study included 13135 patients with a first autologous IVF cycle that resulted in a cycle cancellation was followed by a second autologous cycle[8] . Patients who received the same protocol for both cycles (n¼6434) were compared to those who changed their protocol in the second cycle (n¼6701). Multivariable logistic regression analyses were performed to estimate the adjusted odds of live birth and recurrent cancellation.

. This recent study reported that:

- 1- Changing the protocol in the second cycle resulted 14% lower odds of recurrent cycle cancellation (P¼0.01) and 17% higher odds of live birth after fresh transfers (P¼0.04).
- 2- When stratifying the data by specific combinations of protocol change (agonist flare, agonist suppression, antagonist), there was an increase in live birth when switching from antagonist to agonist suppression (odds ratio (OR) ¼ 1.36, P¼0.03) and from agonist suppression to antagonist (OR¼1.73, P¼0.01) compared to those who repeated their same stimulation protocol.
- 3- Specifically in poor responders, outcomes were worse when using the agonist flare protocol and significantly improved with the agonist suppression protocol.

Clinical Implications

Overall, there is some benefit in changing the protocol in the second cycle after a cancellation, except with the use of an agonist flare protocol which shows poorer outcomes in patients with a prior cancellation. Poor responders may benefit from agonist suppression cycles.

This data is important during counseling of the couple.

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