



PGT-A in patients with a single blastocyst

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I read the paper of Kahraman et al. [1], at first with interest, then surprise, and finally with distress for the patients who underwent the PGT-A procedure.

The conclusions of the authors of this paper were “PGT-A in the presence of a single blastocyst significantly increases clinical pregnancy and live birth rates and decreases total pregnancy losses regardless of age. In addition, aneuploid embryo transfer cancellations prevent ineffective and potentially risky transfers.”

These conclusions are based on live birth rates per embryo transfer. They enrolled 2064 women with diminished ovarian reserve who had only a single good-quality blastocyst. PGT-A was performed in 1126 cycles and in 938 cycles an embryo transfer was done without PGT-A.

Of the PGT-A cycles, only 225 women (20%) had a transferrable, chromosomally normal embryo. There were 115 live births in these 225 women for a live birth rate of 50% per embryo transfer. In the 938 non-PGT cycles, all had an embryo transfer and there were 278 live births for a live birth rate of 30%. The author’s conclusion of benefit from PGT-A was based on this difference in pregnancies per embryo transfer.

However, the relevant issue is how many women who started treatment actually took home a live baby or in other words, the intention to treat analysis. In that case, the live birth rate in the PGT-A group was 115 out of 1126 or 10% and the live birth rate in the non-PGT-A group was 278 of 938 cycles or 30%. This represents a threefold increase in

live births in the non-tested group. In addition, total pregnancy losses were not significantly different (25% PGT-A vs 31%, $p=0.493$).

Therefore, while the authors state unequivocally that PGT-A is beneficial in increasing pregnancy rates and reducing unnecessary miscarriages, in fact, the data would imply that PGT-A is harmful for live birth rate and is not associated with a reduction in spontaneous abortion rates.

From my calculations, based on the pregnancy rate in the non-PGT-A group, if the 1126 women in the treated group had not done PGT-A, there should have been an additional 223 live births.

PGT A in this study caused irreparable harm to patients with diminished ovarian reserve, many of whom lost their only chance to have a baby from their cycle of IVF. The author’s interpretation of the study data is disingenuous and their conclusions are completely misleading.

Reference

1. Kahraman S, Duzguner INB, Sahin Y, Irez T. What to advise to patients with only one good quality blastocyst, PGT-A or not? Outcomes of 2064 cycles. *J Assist Reprod Genet.* 2022;39:2555–62.

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