



Does preimplantation genetic testing for aneuploidy really improve IVF outcomes in advanced maternal age patients without compromising cumulative live-birth rate?

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Dear Editor,

We read with interest the study by Sacchi et al. [1], reporting on a single-center observational-cohort study with 2 years' follow-up, of couples with female patients between 38 and 44 years of age undergoing PGT-A. Compared with control group, patients undergoing PGT-A showed improved clinical outcomes with no negative impact of PGT-A-related interventions on cumulative delivery rate (26.3%, 95% CI 21.5–31.6 vs 24.0%, 95% CI 22.5–25.6 for PGT-A and control, respectively).

While their findings are interesting, the results as presented are quite misleading. A closer look at their results revealed that only patients with FSH levels < 12 mIU/mL and/or AMH levels > 0.5 ng/mL, yielding > 10 oocytes were included, excluding poor ovarian response (POR). Moreover, 370 couples were enrolled to the PGT-A group vs 2168 to the control group—these are the figures that should appear in the denominators when calculating ongoing pregnancy rate (OPR). Recalculation of the cumulative OPR reveals a significant difference in favor of the control group [902/2168 (41.6%) vs 84/370 (22.7%), $p < 0.0000$]. Figures are in agreement with the previously published hypothetical RCT [2].

Furthermore, taking into consideration that the prevalence of POR is above 10% in the general IVF population and increases with age to approximately 50% in women over 40 years of age [3], offering PGT-A to advanced age patients

(including POR) would be even more deleterious. Based on Sacchi et al. [1] study, the 370 couples enrolled were probably chosen from a larger cohort of patients, probably 500 couples, if taking 25% as an average prevalence of POR in this age group. Therefore, cumulative OPR would have been even lower [84/500 (16.8%)], figures that should avoid offering PGT-A to this age group [4].

To conclude, this study again confirms the facts that in unfavorable patient populations (advanced age or POR), who were a priori considered as the best candidates for PGT-A, offering PGT-A may actually reduce pregnancy and live birth chances, and should not be offered in association with IVF.

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