



LETTER



Is it too early to deny resveratrol supplementation in embryo transfer cycles?

To the Editor

We read with interest a recent study in *RBMO* (Ochiai *et al.*, 2019) reporting the detrimental effects of resveratrol supplementation on pregnancy outcomes in IVF-embryo transfer cycles. However, caution should be exercised concerning the robustness of these findings.

Firstly, the two groups were of unequal sample size and not balanced with respect to almost all baseline characteristics. Notably, the supplementation group had considerably more fresh embryo transfer cycles than control. Since mild stimulation protocols with clomiphene citrate were applied to all women, the decrease in endometrial receptivity and implantation caused by clomiphene citrate in fresh embryo transfer could not be simply ruled out (Palomino *et al.*, 2005). Although multiple regression analysis was performed, there remained a variety of important confounders for adjustment such as body mass index, endometrial thickness and infertility indications.

Secondly, the authors suggested that resveratrol was mainly used in women with diminished ovarian reserve, as reflected by the average age of nearly 40 years. This application is rational for the purpose of improving ovarian function, but may be out of scope for embryo transfer. Resveratrol treatment has been demonstrated to reduce weight in obesity (Tabrizi *et al.*, 2018), ameliorate hyperandrogenemia and insulin resistance in polycystic ovary syndrome (Banaszewska *et al.*, 2016), as well as suppress ectopic endometrial invasiveness and inflammation in endometriosis (Kolahdooz Mohammadi and Arablou, 2017). Due to the negative influences of these diseases on pregnancy outcomes (Rittenberg *et al.*, 2011; Katulski *et al.*, 2015; Saraswat *et al.*, 2017), resveratrol may be of more benefit for certain populations in embryo transfer cycles.

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