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LETTER TO EDITOR

Effect of A23187 ionophore treatment on human blastocyst development—a sibling oocyte study

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Dear Sir,

We appreciate the interest shown in our recent publication regarding the effect of A23187 ionophore treatment on human blastocyst development [1].

The aim of the study was to investigate if a specific group of patients with proven fertilization capacity but very poor embryo quality on day 5 can benefit from the ready-to-use A23187 ionophore treatment. The main outcome of the study was embryo utilization rate on day 5, including blastulation rate and embryo quality rate following the ionophore treatment. The main message of our publication was that, in our particular population, the ready-to-use A23187 ionophore treatment does not improve the embryo utilization rate. However, we acknowledged that all embryos transferred after the ionophore treatment reached clinical pregnancy.

There is an increasing number of publications reporting on the use of A23187 ionophore in cases with embryo developmental problems like complete embryo developmental arrest, complete developmental delay (no morula/blastocysts on day 5), or reduced blastulation rate [2–4]. Our publication underlines the fact that not all patients with poor embryo development on day 5 benefit from a 'single' ionophore treatment, which does not exclude that a 'double' application might improve the outcome.

We acknowledge the necessity of confirming our results in a larger population, which will allow also a stratification of patients based on the type of embryo developmental problems. At the same time, similar to Ebner and Shebl [5] in his Letter to the Editor (2022), we recommend a cautious approach of the use of ionophores in clinical application and support the idea of a personalized treatment. In this sense, the indications of 'embryo developmental problems" that can benefit from the A23187 ionophore treatment should be further clarified.

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