IS OOCYTE VITRIFICATION A TOOL FOR LOW RESPONDER PATIENTS?

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Introduction: The aim of this study was to evaluate the usefulness of oocyte vitrification in low responder patients (<4 eggs retrieved).

Material & Methods: During 2009 and 2010, we offered two different alternatives to low responder patients: to perform ICSI as usual or to vitrify mature oocytes in one or two cycles, accumulating and join them to the oocytes obtained in the last cycle to microinject fresh and re-warmed oocytes both together. We include patients performed at least two stimulation cycles. We performed ICSI in 36 low responder patients (91 cycles in total) and 30 vitrified/re-warmed patients (2.4 mean vitrification cycles).

The oocytes were vitrified following Cryotop method using Kitazato (Tokyo, Japan) tools and solutions; and oocytes and embryos were incubated using Life Global media. T-test and chi square test were performed to compare average values and percentages, and p values less than 0.05 were regarded as significant. Results: Before analysing both groups outcome (group 1: accumulating by vitrification and group 2: routine ICSI) no significant differences were observed between groups in age (39.2 vs 38.5), pregnancy rate per patient (20.0% vs 19.4%), pregnancy rate per patient in less than 40 years old patients (20% vs 25 %). We observed significant differences in number of oocytes (4.9 vs 2.1; $p<0.001$), fertilized eggs (3.5 vs 1.2; $p<0.001$), top quality embryos (2.9 vs 1.0; $p=0.01$) and in transferred embryos (2.1 vs 1.0; $p=0.01$).

Conclusions: Cumulative oocyte vitrification in low responder patients doesn't improve gestational outcome, despite we obtain a higher number of oocytes, fertilized zygotes and top quality embryos. Moreover oocyte accumulation prevents fertilization failure and transfer cancellation giving a chance to achieve a pregnancy with their own eggs as a last option before oocyte donation.