Effect of embryo freezing process on birth weight

MC Tió1, J Ten1, A Rodríguez-Arnedo1, J Guerrero1, B Moliner2, F. Sellers2, J Llácer2, R Bernabeu2

1 Instituto Bernabeu, Embryology Dept., Alicante, Spain.
2 Instituto Bernabeu, Reproductive Medicine, Alicante, Spain.

STUDY QUESTION
Are there differences between birth weights of children born after frozen embryo transfer (FET) and those coming from fresh embryos?

SUMMARY ANSWER
Singletons from FET lead to higher birth weights than embryos from fresh cycles.

WHAT IS KNOWNS ALREADY
Recent investigations have showed that freeze-thawed embryos are related with a high incidence of macrosomia suggesting late consequences in the metabolic status of the offspring.

STUDY DESIGN, PARTICIPANTS, SIZE, DURATION AND METHODS
In order to ascertain those finding we performed this transversal study including births at term of single pregnancies from FET and fresh cycles carried out during 2013.

Univariate analysis was performed to compare FET group versus fresh group including Fisher’s exact test for quantitative variables and Student’s t-test for categorical variables.

MAIN RESULTS AND THE ROLE OF CHANCE
Birth weights of children coming from FET were higher than those coming from fresh embryos (p.0.034) being 3331±416g and 3125±571g respectively.

Both groups had same age, parity, gestational age at birth and had no differences between own and donated oocyte proportion.

LIMITATIONS, REASONS FOR CAUTION
On account of the small number of cases in this study it would be necessary perform a more extensive study

WIDER IMPLICATIONS OF THE FINDINGS
The long term consequences of freezing should not be discarded. On the other hand women with known risk of low birth weight may benefit from postponing the transfer making a subsequent FET.

Dr. Ph. Rafael Bernabeu Pérez
Medical Director
Instituto Bernabeu
Alicante, Spain
rbernabeu@institutobernabeu.com