

Effect of embryo freezing process on birth weight

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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 KNOWN 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

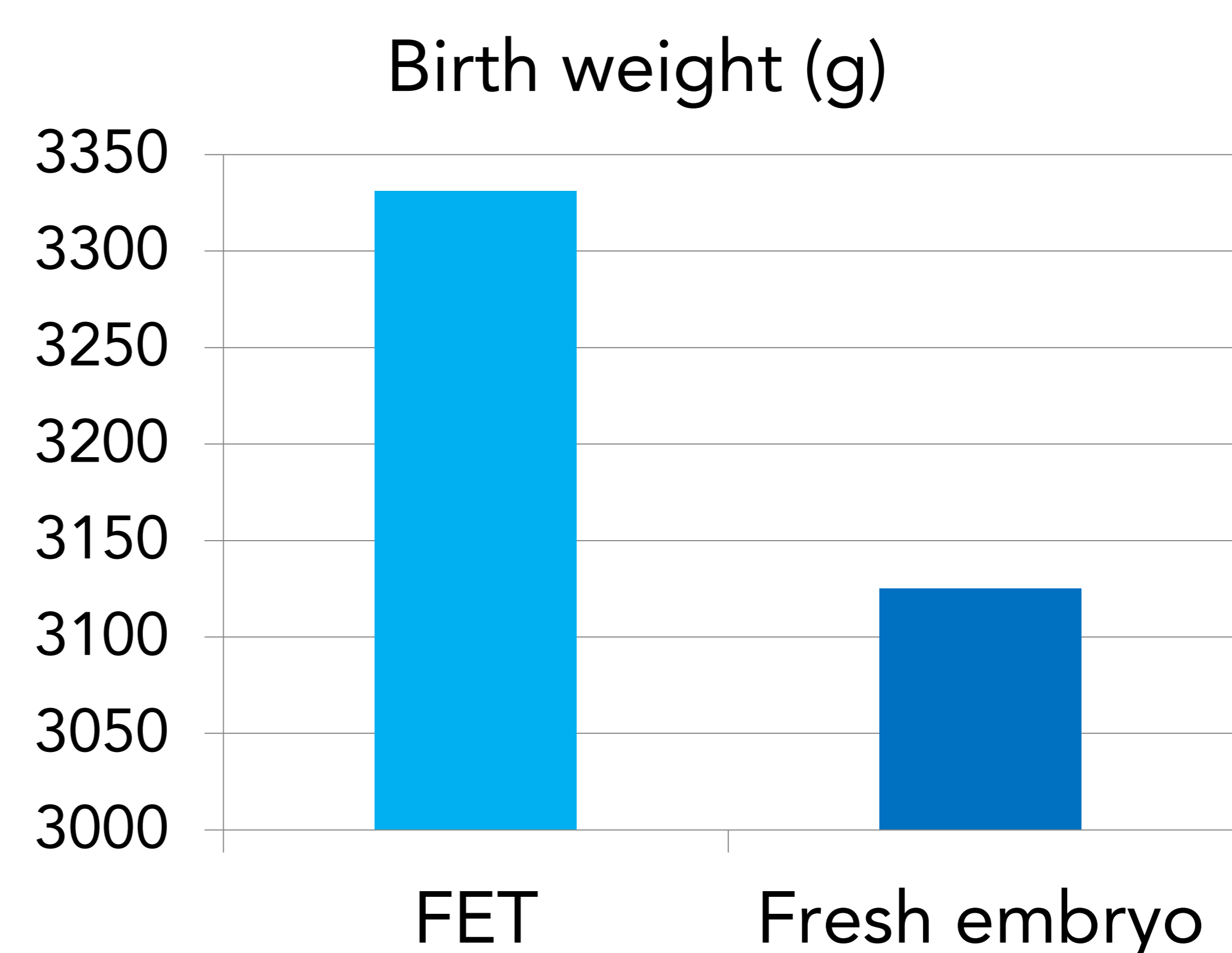
In order to ascertain those finding we performed this transversal study including births at term of single pregnancies from FET and fresh cycles carried out during 2013.

| | FET group | Fresh embryo group | p. |
|----------------------------------|-----------|--------------------|-------|
| n | 60 | 61 | |
| Age | 39.6±4.7 | 38.7±3.9 | 0.248 |
| Nulliparous patients (%) | 78.3 | 75 | 0.829 |
| Own oocyte patients (%) | 38.3 | 39.3 | 1.000 |
| Gestational age at birth (weeks) | 40.1±6.8 | 39.3±1.7 | 0.388 |

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 $3331 \pm 416g$ and $3125 \pm 571g$ 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.



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