

Critical reappraisal of embryo quality as a predictive parameter for pregnancy outcome: a pilot study

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Abstract

Aim of the study: Pilot study to analyse the efficacy and embryo morphology using a new human embryo culture medium (GM501) versus the conventional used medium (ISM1).

Methods: Over a four-month period, all patients at the Leuven Institute of Fertility and Embryology (LIFE) were randomly allocated to have their embryos cultured in either the standard sequential culture medium ISM1 (control) or in a new universal medium (GM501) (study group). Primary outcome parameters were clinical pregnancy and live birth rate. The secondary outcome parameter was the correlation of embryo fragmentation rate with pregnancy outcome.

Results: We did not observe any differences between the ISM1 control group and GM501 study group with regard to fertilization, pregnancy, implantation rates, ongoing pregnancy, and babies born. The number of embryos with a minimal fragmentation rate (less than 30%) was significantly higher in the GM501 study group.

Conclusion: Although a significant higher embryo fragmentation rate was seen in *In vitro* culture of embryos in GM501, pregnancy outcome results were comparable to those of embryos cultured in ISM1. According to our results the value of embryo morphological criteria as a parameter for pregnancy outcome should be examined and discussed again.

Key words: Culture medium, fertilization rate, fragmentation, human embryos, IVF, ongoing pregnancy, pregnancy.