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TITLE

BLASTOCYST COLLAPSE: CASE REPORT AND LITERATURE REVIEW

AUTHOR/S

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ABSTRACT

Context: The success of an IVF cycle is strictly related to the embryo quality, however the identification of a “good viable embryo” with a high development potential is still difficult. Typically, to predict the implantation potential, embryologists consider static and dynamic morphokinetic variables from the early divisions of a cleavage-stage embryo. Time-lapse monitoring technology has recently emerged as a very promising system to identify new parameters for the selection of good quality embryos.

Objective: In this work we present new parameters, namely the occurrence and number of blastocyst collapses, that could be utilized for selecting the embryos with the highest implantation potential.

Methods: Blastocyst observation through time-lapse monitoring technology: videos identifying the occurrence and the number of blastocyst collapses.

Main Outcome Measure: Blastocyst implantation success.

Results: The observation of the blastocyst collapse phenomenon on a series of embryos by exploiting the Eeva™ Test caught our interest and fostered additional on-going researches.

Conclusions: Our observation and a recent research hypothesize that the blastocyst collapse may be linked to the implantation process, either through embryo quality or directly affecting the blastocyst's implantation ability. The role of blastocyst collapse has not been yet clarified and further studies are necessary to understand the association with embryo viability. Nevertheless it could be a relevant indicator in the embryo selection process.

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