

A clinical examination of uninterrupted culture strategy on embryo development and clinical outcomes

Uninterrupted embryo culture, which minimizes disturbances during in vitro development, has been studied for its impact on embryo quality and clinical outcomes in assisted reproductive technology. Research indicates that this approach is associated with higher live birth rates in both autologous and oocyte donation cycles. Specifically, a significant positive association was found between undisturbed embryo culture and higher live birth rates in the first embryo transfer for both autologous (OR, 1.617; 95% CI, 1.074-2.435) and oocyte donation cycles (OR, 1.316; 95% CI, 1.036-1.672). Additionally, cumulative live birth rates after a 1-year follow-up were positively associated with the undisturbed culture strategy in oocyte donation cycles (OR, 1.5; 95% CI, 1.179-1.909).

Furthermore, uninterrupted culture conditions in time-lapse monitoring (TLM) incubators may enhance clinical success rates, independent of embryo selection methods. The stable environment provided by TLM incubators supports human embryonic development, potentially leading to improved outcomes.

In summary, while uninterrupted embryo culture shows promise in improving certain clinical outcomes, findings are not entirely consistent across studies. Further research is necessary to conclusively determine its efficacy and to identify which patient populations may benefit most from this approach.

<u>Undisturbed culture: a clinical examination of this culture strategy on embryo in vitro development and clinical outcomes</u>

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