DOES TIME LAPSE EMBRYO MONITORING AID EMBRYO SELECTION FOR SINGLE EMBRYO TRANSFER? – AN INTERIM ANALYSIS

P. Kovacs, C. Pribenszky, V. Forgacs, A. Sajgo, A. Reichart, F. Rarosi, S. Szabolcs PhD

1. Kaáli Intezet Budapest, Hungary
2. St. Istvan University Faculty of Veterinary Science, Department of Animal Breeding and Genetics, Budapest, Hungary
3. Forgacs Intezet, Budapest, Hungary
4. Department of Medical Physics and Informatics, Bolyai Institute, University of Szeged, Szeged, Hungary

Introduction: Time lapse (TL) embryo monitoring provides additional information about embryo development and therefore may aid embryo selection. Our aim is to study whether TL monitoring is superior to traditional embryo observation when a single blastocyst is selected for transfer (ET).

Methods: Prospective, randomized, ongoing multicenter trial (NCT01694641). Good prognosis patients are randomized to TL monitoring vs. standard daily embryo monitoring. Embryos are cultured in multi-well (9 or 16 wells, group culture) dishes till the blastocyst stage when there are at least 3 good morphology embryos on day 3. The embryo for ET is selected based on day-5 morphology (control group) or on TL observations. Patient, cycle, embryology and outcome parameters were compared.

Results: This report is based on the results of the first 50 randomized patients (24 TL vs. 26 standard monitoring). Of those randomized, 12 dropped out (5 [20.8%] in the TL group and 7 [26.9%] in the control group) for various reasons. Patient/stimulation parameters are comparable. Pregnancy rates (PR)/randomization: 13/24 (54.1%, TL) vs 10/26 (38.4% control) [p=0.26]; ongoing PR/randomization: 13/24 (54.1% TL) vs 9/26 (34.6% control) [p=0.16] are not significantly different. The per protocol PR: 13/19 (68.4% TL) vs 8/19 (42.1 control) [p=0.10] and per protocol ongoing PR: 13/19 (68.4% TL) vs 7/19 (36.8% control) [p=0.051] are not significantly different.

Conclusions: TL observation of embryos seems to assist embryo selection when used for selection for SET. This non-invasive method could prove to be a useful tool in minimizing the risk of multiple gestations.