Does Multinucleation Correlate to Direct and Reverse Cleavage in Day 2 Cleavage Stage Embryos? A Time-lapse Analysis.

Centre for Reproductive and Genetic Health 230-232 Great Portland Street London W1W 5QS

Introduction and Aim
Abnormal cleavage behaviour (reverse and direct cleavage) and multinucleation have been associated with aneuploidy and low implantation rates. The objective of this study was to determine the incidence of multinucleation and whether it correlates with reverse and direct cleavage and their significance to blastocyst formation.

Materials and Methods
- Retrospective study of time lapse ICSI embryos
- Sequential media (Sage, Origio UK)
- Morphokinetic analysis

Results
243 out of 1279 embryos (19%) embryos were multinucleated. 5.3% of these reverse cleaved and 6.2% direct cleaved. Embryos that showed direct cleavage divisions and multinucleation did not reach the blastocyst rate as readily (p<0.05).

1. CONCLUSION
Multinucleation is not correlated with reverse or direct cleavage.

2. CONCLUSION
Multinucleation and reverse cleavage do not affect blastocyst formation.

3. CONCLUSION
Direct cleavage and multinucleation can lower blastocyst rate.