



Figure 2. Mean temperature readings over test period for each workstation. This figure illustrates the improved temperature stability of WS2 and particularly WS3 when compared to WS1.

tives. WS2 and WS3 demonstrated high temperature stability for all 3 objectives (Fig. 2).

Discussion: Culture drops undergo fluctuations when using a workstation with aperture for micromanipulation. This problem can be partially overcome by replacing the aperture with a glass platform; however, culture drops are susceptible to significant changes in temperature caused by different objectives. An AWS maintains temperature stability over time and is not affected by choice of objective.

Keywords: Micromanipulation; Temperature; Stability; ICSI; IMSI

PP-032

No difference in clinical pregnancy and implantation rates between single and double transfer of euploid embryo(s)

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There is a growing body of evidence that preimplantation genetic screening (PGS) provides valuable information for embryo selection before embryo transfer (ET). It has been shown that equivalent pregnancy rates can be achieved by transferring one euploid blastocyst compared to two untested embryos. It has a great importance of properly advise patients about their chances before transfer of euploid embryo(s).

Abstract PP-033 – Table 1. O₂ concentration and kinetic parameters

| | t2PN | tPF | t2 | t3 | t4 | t5 | t6 | t7 | t8 | t9+ | tM | tB | tBE | tHB |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TRIGAS | 9.11 | 23.21 | 25.92 | 35.72 | 37.85 | 47.16 | 50.52 | 53.77 | 57.5 | 66.44 | 85.15 | 103.74 | 111.82 | 111.96 |
| No TRIGAS | 9.67 | 24.45 | 27.69 | 37.45 | 39.98 | 49.91 | 53.44 | 56.9 | 60.71 | 69.38 | 87.38 | 104.27 | 112.7 | 111.37 |
| p-value W | p<0.05 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.01 | p<0.05 | ns | ns | ns |

Our results showed a significantly higher division rate from pronuclei formation up to morula stage in those embryos cultured in low O₂ concentrations.

Data from eighty patients having *in vitro* fertilization cycle combined with PGS with a single or double ET between January of 2013 and January of 2014 were retrospectively analysed.

Forty-five patients had single embryo transfer from which 8 had elected single embryo transfer and 35 had double embryo transfer. There was no difference in chemical (22/45 (48.88%) vs. 23/35 (65.71%); $p>0.05$) and clinical (18/45 (40.00%) vs. 19/35 (54.28%); $p>0.05$) pregnancy and implantation (18/45 (40.00%) vs. 28/70 (40.00%); $p>0.05$) rates between single and double embryo transfer, respectively. However, twin pregnancy rates significantly differed between the two groups. There was one twin pregnancy in the single ET group, while 9 out of 19 (47.36%) pregnancies were twins in the double ET group.

Patients with advanced maternal age and multiple failed IVF cycles often resist participating in single embryo transfer program, even when embryo selection is supported by comprehensive chromosome screening. Patients need to be informed that their chance of getting pregnant is not increased by transferring more than one embryo. However, it carries a significant risk of twin pregnancy which should be avoided in quality IVF.

Keywords: PGS; Single embryo transfer; Twin pregnancy

PP-033

Measurement of oxygen concentration effect on embryonic morphokinetic during blastocyst culturing

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Low Oxygen blastocyst culture seems to improve clinical outcomes in ART. Assessment of cellular division times during embryo development is a new tool for embryologist. Our objective is to study if O₂ concentration has any effect on embryo kinetics and if it can help to define more efficient embryo selection criteria

This is an observational retrospective study based on 1830 zygotes cultured in a Time Lapse system (Embryoscope; Unisense Fertilitect) between December 2011 and April 2013. A total of 617 zygotes were culture in low (5%) O₂ concentration (Incubator 1) and 1213 zygotes were cultured in atmospheric O₂ concentrations (Incubator 2).

Each zygote was monitored to analyse times to reach 2PN (t2PN), pronuclear fading, cellular division up to morula stage (t2, t3, t4, ...), Morula stage (tM), Blastulation (tB), Expanded Blastocyst (tBE) and Hatching (tHB).

Mann-Whitney test was used to compare average cellular division times between both groups.

We also assessed markers associated with high implantation rate previously described by Messeger et al.(2011). Our results showed a significantly higher division rate from pronuclei formation up to morula stage in those embryos cultured in low O₂

Abstract PP-033 – Table 2

| | t5 | cc2 (t3 - t2) | s2 (t4 - t3) |
|-----------|--------|---------------|--------------|
| TRIGAS | 28.53 | 73.74 | 55.75 |
| No TRIGAS | 33.31 | 55.98 | 46.99 |
| p-value | p<0.05 | p<0.01 | p<0.01 |

The percentage of embryos falling within the optimal ranges defined for cc2, t5 and s2 were different between the two groups.