

PP-044

Euploid blastocysts show a trend of higher implantation and clinical pregnancy rates compared to untested blastocysts in FET cycles

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Introduction: This is a retrospective study comparing the implantation rates (IR) and clinical pregnancy rates (CPR) in IVF patients who had PGS with those who did not have PGS (non-PGS) in frozen embryo transfer (FET) cycles.

Materials and Methods: 154 FET cycles had frozen euploid blastocyst(s) transferred (PGS group) and 249 FET cycles with unscreened blastocyst(s) (non-PGS) transferred at Alpha International Fertility Centre (AFC), Malaysia from July 2013 to December 2015. These cases were divided into 5 groups, age <35, 35-37, 38-39, 40-41 and >41. The number of PGS and non-PGS cycles in each age group was 95 vs 141, 26 vs 47, 19 vs 31, 12 vs 22 and 2 vs 8 respectively. All 639 blastocysts were thawed with a 100% survival rate.

Results: The mean age was comparable in all the age groups. The mean number of embryos transferred were 1.4 and 1.7 for PGS group and non-PGS group respectively (p<0.0001). Clinical pregnancy rates per embryo transfer (CPR/ET) for PGS and non-PGS cycles were 63.2%(60/95) vs 63.1% (89/141) for <35 year old, 61.5% (16/26) vs 53.2% (25/47) for 35-37 year old, 63.2% (12/19) vs 35.5% (11/31) for 38-39 year old, 58.3% (7/12) vs 31.8% (7/22) for 40-41 year old, and 50.0% (1/2) vs 37.5% (3/8) for >41 year old. There was no statistical significance in clinical pregnancy rates between the 2 groups for all ages. However there is a trend of higher CPR in the PGS group. The IR for PGS group was significantly higher than the non-PGS group for age groups 38-39 (58.3% vs 25.0%; p<0.009) and 40-41 (61.5% vs 24.3%; p=0.0210). IR for age groups <35, 35-37 and >41 were not statistically different but there is a trend of higher IR in PGS group. There was no significant difference in the IR between all age groups in the PGS group.

Abstract PP-044 – Table 1. Patient characteristics

| | PCOS | non-PCOS | p |
|--------------------------------------|-------------------------|-------------------------|-------|
| n | 314 | 32 | |
| Age (median [IQR]) | 29.00 [26.00, 31.00] | 30.00 [27.00, 32.00] | 0.180 |
| AMH (median [IQR]) | 13.41 [11.35, 16.00] | 11.66 [9.11, 14.01] | 0.002 |
| BMI (median [IQR]) | 21.08 [19.57, 23.23] | 20.87 [19.19, 22.80] | 0.379 |
| Endometrium thickness (median [IQR]) | 12.00 [11.00, 13.00] | 12.00 [12.00, 13.00] | 0.156 |
| Type of infertility (%) | | | 0.285 |
| Primary | 237 (75.5) | 21 (65.6) | |
| Secondary | 77 (24.5) | 11 (34.4) | |

Conclusion: This study showed euploid blastocysts have a trend of higher CPR compared to untested blastocysts in FET cycles despite higher mean number of blastocysts transferred in non-PGS (1.7 vs

1.4). The IR for the PGS group was significantly higher in age groups 38-39 and 40-41.

Keywords: Cryopreservation, Frozen blastocyst transfer, PGS, Implantation, Clinical pregnancy, IVF

PP-045

Clinical outcome of assisted reproductive technology treatments in relation to oocyte retrieval day

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Introduction: A retrospective study comparing the outcomes of IVF cycles with different oocyte retrieval (OR) days.

Materials and Methods: One thousand one hundred and thirty-four (1134) patients aged less than 38 years old (mean age: 31.8, range 18-37) had OR in Alpha International Fertility Centre (AFC), Malaysia from July 2011 to December 2015. Clinical outcomes were analysed retrospectively according to day of OR as follows: 8 (n=1), 9 (n=10), 10 (n=54), 11 (n=102), 12 (n=287), 13 (n=360), 14 (n=173), 15 (n=104), 16 (n=30), 17 (n=9), 18 (n=3), and 21 (n=1); where Day 1 is the start of gonadotropin administration. All cases were intended for fresh embryo transfer at either cleavage stage or blastocyst.

Results: There was no statistical significance in number of embryo(s) transferred in all groups. Of the 1134 OR's, 966 cases (85%) had embryo transfer (ET). Cases that failed to reach ET were due to no chromosomally suitable embryos (n=70), poor embryo quality (n=50), failed fertilisation (n=37) and others (n=11). Clinical pregnancy rates (CPR) per OR were 0.0%, 60.0%, 57.4%, 54.9%, 48.8%, 48.3%, 53.2%, 51.0%, 36.7%, 33.3%, 0.0% and 100.0% for Day 8 to Day 21 respectively (P>0.05). We observed a tendency towards lower CPR/OR for patients who had their OR on Day 16 and Day 17. CPR/ET were 0.0%, 66.7%, 70.5%, 61.5%, 56.2%, 57.0%, 60.9%, 61.6%, 47.8%, 60.0%, 0.0% and 100.0% for Day 8 to Day 21 respectively (P>0.05). Implantation rates (IR) according to day of OR were 0.0%, 44.4%, 49.4%, 41.6%, 41.4%, 39.5%, 46.1%, 39.7%, 31.8%, 33.3%, 0.0% and 100.0% for Day 8 to Day 21 respectively, with no statistical significance in all groups (P>0.05). Again, we observed a tendency towards lower IR for patients who had their OR on Day 16 and Day 17. Outcomes of Day 8, Day 18 and Day 21 may not be reflective due to small numbers of data.

Conclusions: This study suggests that prolonged ovarian stimulation beyond Day 15 tends to have lower pregnancy rates and implantation rates.

Keywords: IVF, Day of oocyte retrieval, Clinical outcomes, Implantation, Clinical pregnancy, Fresh transfer

Abstract PP-045 – Table 1. Clinical outcomes with different oocyte retrieval (OR) days

| Day of Oocyte Retrieval (OR) | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 21 | Total |
|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|
| No. of Cases had OR | 1 | 10 | 54 | 102 | 287 | 360 | 173 | 104 | 30 | 9 | 3 | 1 | 1134 |
| No. of Cases Reached Fresh Embryo Transfer (ET) | 1 | 9 | 44 | 91 | 249 | 305 | 151 | 86 | 23 | 5 | 1 | 1 | 966 |
| No. of Embryos Transferred | 1 | 18 | 87 | 185 | 505 | 638 | 304 | 174 | 44 | 9 | 2 | 1 | 1968 |
| No. of Sacs | 0 | 8 | 43 | 77 | 209 | 252 | 140 | 69 | 14 | 3 | 0 | 1 | 816 |
| Clinical Pregnancies per OR | 0.0% | 60.0% | 57.4% | 54.9% | 48.8% | 48.3% | 53.2% | 51.0% | 36.7% | 33.3% | 0.0% | 100.0% | 50.0% |
| Clinical Pregnancies per ET | 0.0% | 66.7% | 70.5% | 61.5% | 56.2% | 57.0% | 60.9% | 61.6% | 47.8% | 60.0% | 0.0% | 100.0% | 58.7% |
| Implantation Rate | 0.0% | 44.4% | 49.4% | 41.6% | 41.4% | 39.5% | 46.1% | 39.7% | 31.8% | 33.3% | 0.0% | 100.0% | 41.5% |