

Introduction

Oocyte aging >35 years (y) is related to a lower oocyte and embryo competence mainly due to increased incidence of aneuploidies and decreased mitochondrial activity, leading to a lower high quality blastocyst rate, higher miscarriage rate and lower pregnancy and live-birth rates; however, few data are available on euploid single blastocyst transfer (eSBT) comparing success rates, obstetric and perinatal results when using oocytes ≤35y Vs >35y that have led to high quality blastocysts.

Material and Methods

Retrospective single-centre comparative study, including 1.354 eSBT (≥3BB, Gardner score) between Jan-2018 and Dec-2022: 1.149 (85%) egg≤35y and 205 (15%) egg>35y: average oocyte's age was $\bar{x}$ =27.5±4.6 y Vs $\bar{x}$ =38.6±2.3y, p<.0001

The egg≤35y and egg>35y groups were homogeneous for recipient's age (41.7±4.8y Vs 39.3±4.6y), body mass index (22.7±4.8 Vs 22.3±3.4) severe male factor (4.3% Vs 3.9%), the need for sperm donation (29.8% Vs 29.1%), and the average throphoectoderm embryo quality (A=32.4% Vs A=31.0%)

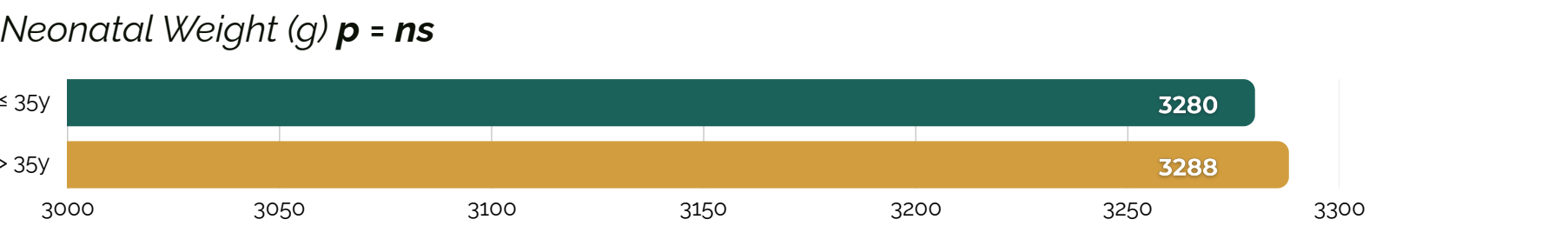
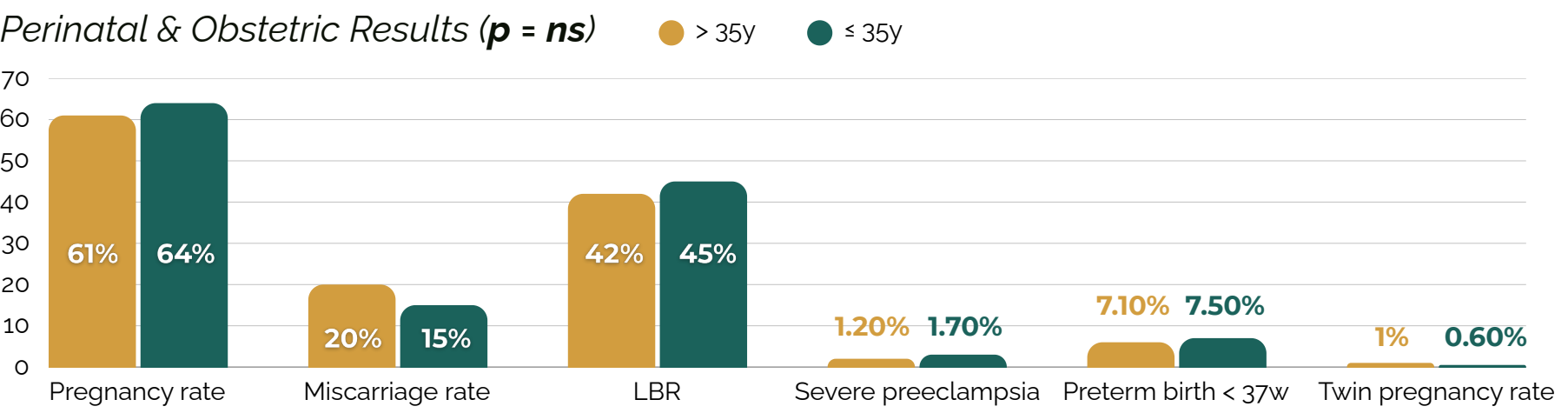
We studied the clinical, obstetric and perinatal outcomes of the 1.354 eSBT, comparing egg≤35y and egg>35y groups: pregnancy rate, miscarriage rate, live birth rate, twin pregnancy rate, severe preeclampsia, preterm birth rate (<37, <35, <32 and <28 weeks) and neonatal weight. We used Chi-square test and T-Test to compare groups (p < .05).

HOMOGENEITY STUDY 1.354 single euploid FET			
	> 35y	≤ 35y	p
n	205	1.149	
Oocyte's age	38.6±2.3	27.5±4.6	< .0001
Recipient age	39.3±4.6	41.7±4.8	ns
Recipient BMI	22.3±3.4q	22.7±4.8	ns
Sperm donation	29.1 %	29.8 %	ns
Trophoectoderm A	31.0 %	32.4 %	ns

On behalf of all authors, the corresponding author states that there is no conflict of interest

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Results



Limitations, Reasons for Caution

The egg>35y group included a significantly higher average of patients that underwent eSBT in a modified natural cycle (mNC) protocol compared to the egg≤35y group (25,6% Vs 16,8%, p=.03); however, a preliminary study didn't report differences between mNC and hormonal replacement treatment protocols for the same study sample.

Conclusions

Oocyte competence has been proved to decrease with aging, leading to a lower blastocyst rate and higher aneuploidy rate; however, in eSBT, the use of oocytes ≤35y did not report higher success rates nor better obstetric and perinatal results compared to the use of oocytes >35y.