

IMPACT OF TIME INTERVAL BETWEEN EMBRYOS LOADING TIME AND TRANSFER ON THE PREGNANCY AND IMPLANTATION RATE : FROZEN-THAWED CYCLE

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In the past years interest has increased in the methodology of embryo transfer. A number of prognostic factor have been described for embryo transfer such as absence of blood or mucus in the transfer catheter, type of catheter or use of ultrasound guidance. But the impact of time interval between embryos loading and transfer is unclear.

OBJECTIVE

To evaluate the impact of time interval between embryos loading time and transfer on the pregnancy and implantation rate.

MATERIAL & METHOD

This study was a retrospective analysis of frozen thawed blastocyst transfer cycle with 24 chromosome aneuploidy screening at Superior A.R.T. from November 2012 to April 2017. Total 383 cycles were divided by patients' age and time interval between embryos loading and transfer. Re-expanded blastocyst NAD (normal as detected) embryos were selected and loaded into the soft catheter to transfer in frozen cycle under abdominal ultrasound guidance.

The presence of mucous, blood in the inner catheter determined by the embryologist excluded from this study.



Figure I. Transfer catheter diagram. The entire catheter was flushed with medium then drawn air, medium, air, medium with embryo and air in the end. Total volume is 20 µl.

Clinical pregnancy and implantation rate were compared between each group. The p-values <0.05 were considered to statistical significance.

RESULTS

Three groups were established on the basis of the time interval between embryos loading and transfer with the following cut-offs: <40sec vs 41-80 sec vs >80 sec.

238 cycles from patients' age <35 years. The results showed no significant difference of pregnancy and implantation rate as shown in **Table I**.

Table I : Comparison outcome of patients' age <35 years

	< 40 sec (n = 164)	41-80 sec (n = 67)	>80 sec (n = 7)	P
Patients' age (years)	30.6 ± 2.5	30.3 ± 2.7	30.4 ± 2.8	NS
Pregnancy rate (%)	66.3	71.6	66.7	NS
Implantation rate (%)	53.4	59.8	36.4	NS

145 cycles from patients' age >35 years have showed no statistically significant difference in term of pregnancy and implantation rate as shown in **Table II**.

Table II : Comparison outcome of patients' age ≥35 years

	<40 sec (n = 97)	41- 80 sec (n = 46)	>80 sec (n = 2)	P
Patients' age (years)	37.2 ± 2.1	37.2 ± 1.9	37.5 ± 0.7	NS
Pregnancy rate (%)	59.4	56.5	0.0	NS
Implantation rate (%)	51.3	49.1	0.0	NS

CONCLUSIONS

According to the results, speed of embryo transfer does not impact to the success of pregnancy and implantation rate. Further studies are required to determine the true impact.