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INTRODUCTION

- Embryo transfer procedure is a crucial step in assisted reproduction technology.
- Embryo transfer use either frozen or fresh embryo technique.
- Currently, only clinical judgement determine the use of each method without any regards of outcome for the children.
- Only a few studies investigating the impact of each technique to postnatal growth and development.
- Aim:** To compare the growth and development of children aged 0 - 3 years between frozen and fresh embryo transfer technique.

METHOD

- Cross-sectional study
- October 2018 until October 2019
- Subjects:**
 - Children born from women having undergone in vitro fertilization using either frozen or fresh embryo transfer and given birth to a singleton fetus
 - Children with congenital or genetic abnormalities were excluded
- Measurement:**
 - Child growth: WHO Child Growth Standards 2006
 - Child development: Pre-Screening Developmental Questionnaire (PSDQ)
- Total 60 subjects
 - 30 Frozen embryo technique
 - 30 Fresh embryo technique

RESULT

- There was no difference in growth and development between groups.
- There was no difference in the risk of nutritional disorders ($p > 0.05$, OR 0.64, CI95% 0.10-4.15).
- There was no difference in the risk of short stature ($p > 0.05$, OR 0.36, CI95% 0.06-2.01).
- Children born using frozen embryo transfer had a lower risk of developing low birth weight compared to the fresh embryo group ($p < 0.05$, OR 0.17 CI95% 0.03-0.85).

No.	Characteristics	Frozen n=30	Fresh n=30	p
1	Paternal age (years)	0 (0)	0 (0)	0,26
	- 25-29	9 (30)	7 (23.3)	
	- 30-34	13 (43.3)	19 (63.3)	
	- 35-39	8 (26.7)	4 (13.4)	
	- 40-44	0 (0)	0 (0)	
2	Maternal age (years)	35 (3)	34 (3)	1.00
	- 25-29	12 (40)	13 (43.3)	
	- 30-34	16 (53.3)	14 (46.7)	
	- 35-39	1 (3.3)	1 (3.3)	
	- 40-44	0 (0)	0(0)	
3	Infertility duration (years)			0.95
	1-2 years	3 (10)	3 (10)	
	3-4 years	10 (33.3)	14 (46.7)	
4	Etiology			0.61
	Female	15 (50)	17 (56.7)	
	Male	5(23.3)	4 (13.3)	
	Both	8 (26.7)	9 (30)	

CONCLUSION

There was no difference in the growth and development of children born using either frozen or fresh embryo transfer. The risk of low birth weight infants was lower in frozen embryo transfer groups.

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