

No difference in pregnancy rates using dedicated versus versatile embryo transfer media in euploid frozen embryo transfer cycles

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INTRODUCTION

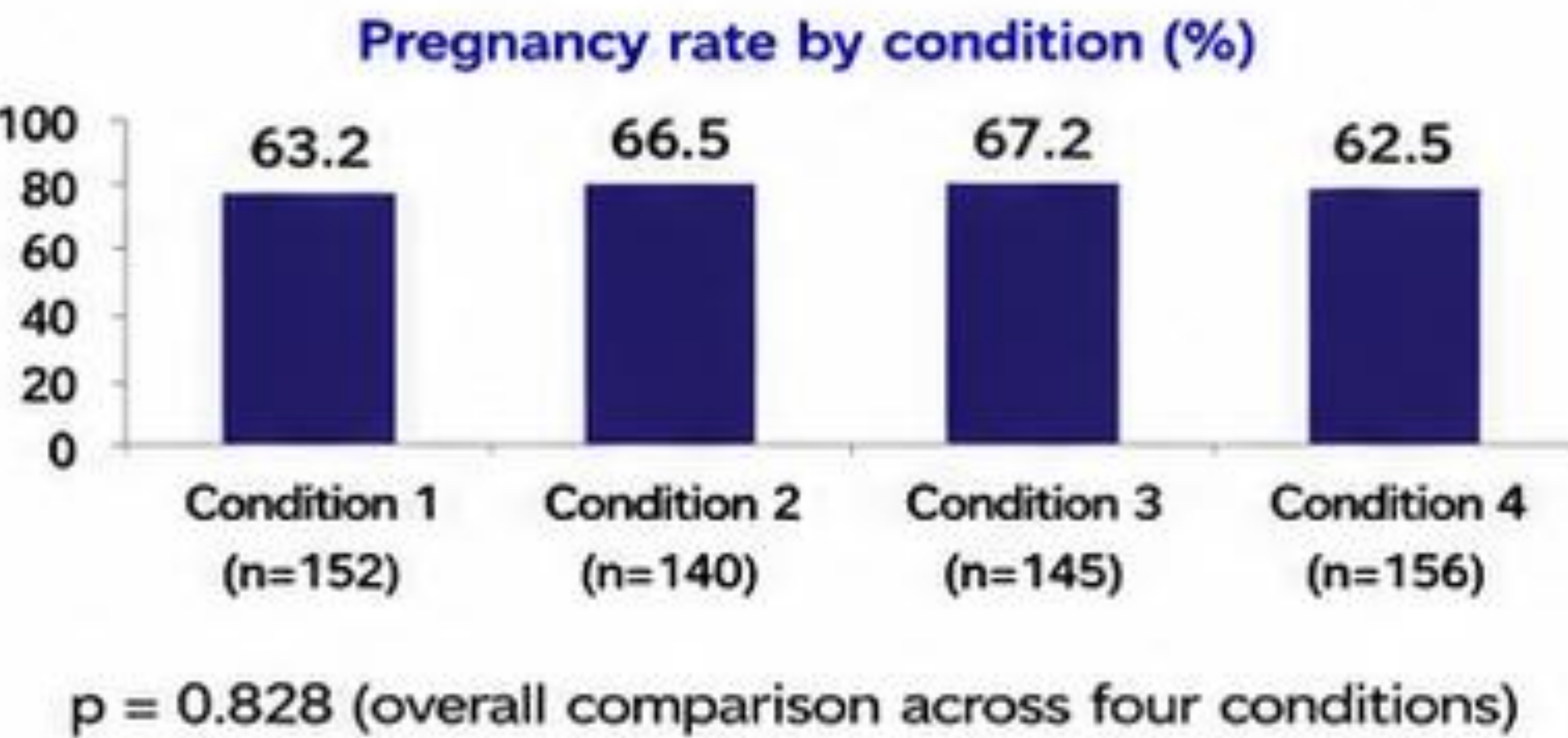
Whether a dedicated embryo transfer medium is required to optimize frozen embryo transfer outcomes remains debated. Published data are conflicting, with some studies suggesting improved pregnancy rates compared with versatile embryo culture media, while others demonstrate no clinical advantage. Further evaluation in controlled laboratory settings is warranted.

AIM

To compare clinical pregnancy rates in euploid frozen embryo transfer (FET) cycles using a dedicated embryo transfer medium versus a versatile embryo culture medium used for transfer, independent of embryo culture medium.

METHOD

- Retrospective study of euploid autologous FET cycles performed between 2023 and 2025 in a private IVF center.
- Two embryo culture media (ECM) and two embryo transfer media (ETM) were evaluated, with identical vitrification and warming protocols across all groups.
- Blastocyst recovery procedures, embryo transfer catheters, physician practices, and embryology staffing remained unchanged across all conditions.
- Clinical pregnancy rate (presence of fetal heartbeat at 6–8 weeks) was the primary outcome.



RESULTS

- A total of 593 euploid FET cycles were included for pregnancy rate analysis.
- Pregnancy rates did not differ between dedicated and versatile embryo transfer media, regardless of the embryo culture medium used.

Study design and conditions evaluated

Condition	Embryo Culture Medium (ECM)	Embryo Transfer Medium (ETM)	FET Cycles (n)	Pregnancy Rate n (%)
1	CSCM-NXC	CSCM-NXC (versatile)	152	96 (63.2)
2	GxTL	CSCM-NXC (versatile)	140	93 (66.5)
3	CSCM-NXC	EmbryoGlue (dedicated)	145	97 (67.2)
4	GxTL	EmbryoGlue (dedicated)	156	98 (62.5)

Analysis by embryo culture medium (ECM)

- CSCM-NXC (Conditions 1 + 3): 193/301 (64.1%)
- GxTL (Conditions 2 + 4): 191/296 (64.5%)
- No difference between ECMs (p = 0.904)

Analysis by embryo transfer medium (ETM)

- CSCM-NXC (versatile; Conditions 1 + 2): 189/292 (65.1%)
- EmbryoGlue (dedicated; Conditions 3 + 4): 195/301 (62.8%)
- No difference between ETMs (p = 0.561)



These findings indicate no clinical advantage of a dedicated embryo transfer medium over a versatile culture medium for embryo transfer in euploid FET cycles in this setting.

CONCLUSIONS

- Pregnancy rates were similar across all four conditions (63.2%, 66.5%, 67.2%, and 62.5%; p = 0.828).
- No difference was observed when comparing embryo culture media (p = 0.904) or embryo transfer media (p = 0.561).
- Use of a dedicated embryo transfer medium did not improve clinical outcomes compared with a versatile embryo culture medium used for transfer, independent of the embryo culture medium.
- Laboratories may consider using a versatile medium for transfer without compromising clinical outcomes in euploid FET cycles.

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