

Progesterone routes for Luteal Support in Programmed-FET: Systematic Review & Network Meta-Analysis.

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Objective

To perform a systematic review and network meta-analysis to determine the efficacy of different routes of progesterone administration as luteal support in programmed FET cycles.

Design

A systematic review and network meta-analysis.

Method

In programmed FET cycles, exogenous progesterone supports the luteal phase due to absent corpus luteum. This network meta-analysis included high-quality RCTs (assessed via TRACT checklist) comparing oral, vaginal, intramuscular, and subcutaneous progesterone for luteal phase support. Outcomes were clinical pregnancy and miscarriage rates. A random-effects NMA using a design-by-treatment interaction model reported risk ratios (RR) with 95% CI. Certainty of evidence was assessed with GRADE. Analysis was performed in STATA 16.

Results

Nine high integrity RCTs (n=3,921) were included. No significant differences in clinical pregnancy or miscarriage rates were found between oral, vaginal, intramuscular, subcutaneous, or combined progesterone routes. Effect estimates showed wide confidence intervals, reflecting uncertainty. The overall risk of bias was moderate to high.

Conclusions

This NMA demonstrates that oral, vaginal, injectable, and combined progesterone administration routes are equally effective for CPR and risk of miscarriages as LPS in FET cycles.

