

THE RELATIVE EFFICACY OF THREE VAGINAL PROGESTERONE DRUGS IN ATTAINING A FAVORABLE MID-LUTEAL ENDOMETRIAL ECHO PATTERN CONTROLLED OVARIAN HYPERSTIMULATION IN WOMEN ≤ 35

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Introduction

Endometrial thickness and echo pattern are the most commonly used markers for evaluating endometrial receptivity assessed by transvaginal ultrasound and predictors of pregnancy occurrence¹.

Some studies have suggested that the presence of a triple-line (TL) endometrial echo pattern in the mid-luteal phase is associated with lower live delivered pregnancy rates (LDRPs) per embryo transfer²⁻⁴.

Optimizing luteal support with vaginal progesterone (P) may influence endometrial development and clinical outcomes in women undergoing in vitro fertilization-embryo transfer (IVF-ET).

Objectives

The objective of this study was to determine the relative efficacy of endometrin®, compounded P suppositories, and crinone® in reducing the occurrence of TL endometrial echo pattern and in improving LDRPs in women under 35 years of age.

Methods

- Women <35 years undergoing IVF-ET with day 3 embryos had transvaginal sonography 3–4 days post-transfer to assess endometrial echo pattern (homogeneous hyperechogenic (HH), isoechogenic (IE), or TL).
- P was initiated the day after oocyte retrieval: endometrin vaginal tablets 100 mg 3×/day, crinone vaginal gel 90 mg 2×/day, or compounded P vaginal suppositories 400 mg 2×/day, according to insurance coverage.
- Patients with a TL pattern received an additional 100 mg IM P until pregnancy testing.
- LDRPs was analyzed per P type and endometrial echo pattern. Statistical comparisons were performed using chi-square testing.

Results

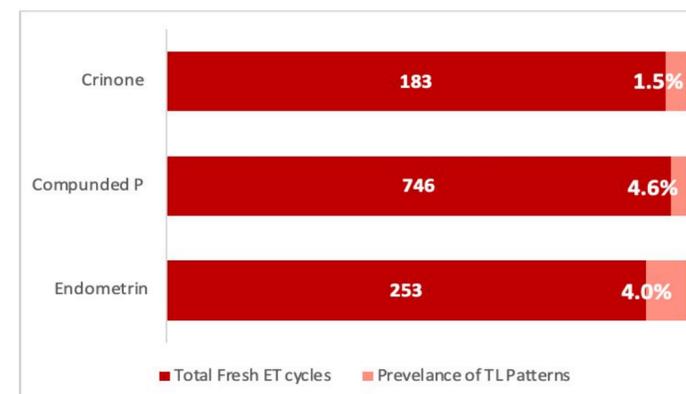


Figure 1. Comparison of Crinone, Compound Suppositories and Endometrin Groups for Total Fresh ET Cycles and Incidence (%) of Mid-Luteal TL Patterns

	HH	IE	TL
Crinone Vaginal Gel	34.7%	36.7%	0.0%
Compounded P	43.1%	39.8%	26.5%
Endometrin	46.3%	52.1%	35.7%

Table 1. Comparison of Percentages of Live Delivered Pregnancy Rates Per Embryo Transfer for Each Echo-Patterns

Next Steps

- A mid-luteal TL pattern is uncommon with any form of vaginal P support but trends toward lower LDRPs when present.
- Switching vaginal P type does not appear effective in preventing this pattern; however, adding IM P may be a practical strategy for subsequent cycles.
- From a cost perspective, compounded P suppositories were most frequently chosen due to markedly lower expense compared with commercial preparations.
- Given the absence of clear efficacy differences (no statistical differences) among vaginal P types, choice of therapy can be guided by financial considerations and insurance coverage.

References

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