

Poster

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[P1-4] P1 ART

[P1-068] Clinical Pregnancy Rates in First Embryo Transfer: A Comparative Analysis of Vaginal and Oral Progesterone Administration

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Objective: The aim of this study was to compare the effects of vaginal progesterone administration and oral progesterone administration on clinical pregnancy rates in patients undergoing their first single embryo transfer (SET or SBT) since 2020. **Methods:** This retrospective study included patients who had their first single embryo transfer after their initial visit in 2020. Patients were divided into two groups based on luteal phase support method: an oral progesterone group (Lutal or Duphaston) and a vaginal progesterone group. The study analyzed pregnancy outcomes in both SET (single embryo transfer) and SBT (blastocyst transfer) groups. Key variables included patient history of pregnancy, age, blastocyst stage, endometrial thickness at transfer, and clinical pregnancy rates. Statistical significance was set at $P < 0.05$. **Results:** In the SET group, the vaginal progesterone group ($n=363$) showed significantly lower clinical pregnancy rates compared to the oral progesterone group ($n=1132$) (40.2% vs. 49.1%, $P = 0.003$). Endometrial thickness was significantly higher in the vaginal progesterone group (11.10 ± 2.33 mm vs. 10.84 ± 1.79 mm, $P = 0.030$). Similarly, in the SBT group, clinical pregnancy rates were lower in the vaginal progesterone group ($n=310$) compared to the oral progesterone group ($n=923$) (43.9% vs. 55.4%, $P < 0.001$). Endometrial thickness was also significantly greater in the vaginal progesterone group (11.11 ± 2.32 mm vs. 10.82 ± 1.77 mm, $P = 0.028$). **Conclusions:** Vaginal progesterone administration was associated with lower clinical pregnancy rates compared to oral progesterone in both SET and SBT groups. Although the vaginal progesterone group exhibited greater endometrial thickness, the impact of this on pregnancy outcomes requires further investigation. These findings suggest that the choice of luteal phase support method may significantly influence pregnancy success rates in the first embryo transfer cycle.