



AMERICAN SOCIETY FOR
REPRODUCTIVE MEDICINE



American Society for Reproductive Medicine 2020 Virtual Congress

October 17-21, 2020

IS THE MID-LUTEAL PROGESTERONE CHECK AN EXAMPLE OF MEDICALIZATION IN THE TREATMENT OF SAME-SEX FEMALE COUPLES UNDERGOING DONOR SPERM INTRAUTERINE INSEMINATION?

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OBJECTIVE:

Evaluation of mid-luteal progesterone (MLP) is frequently performed in order to assess evidence of ovulation. While some researchers have demonstrated a positive association between MLP and live birth [1], others have demonstrated no difference in MLP between fertile and non-fertile cycles [2, 3]. Several studies have evaluated MLP in ovulation induction (OI) cycles within heterosexual couples [4, 5], yet, data regarding the clinical value of MLP in same-sex female couples is limited. It has been suggested that medicalization, the process by which human conditions and problems come to be defined and treated as medical conditions, adds to healthcare costs while not impacting treatment. Our study aimed to evaluate whether MLP in same-sex female couples is associated with changes in outcomes in natural cycles using donor sperm intrauterine insemination (DIUI).

DESIGN:

Retrospective cohort study

MATERIALS AND METHODS:

This was a retrospective study of all same-sex female couples undergoing DIUI from 2004 to 2020. Cases included all patients who had evaluation of MLP. Controls included all patients without MLP testing. MLP was obtained approximately 7 days after ovulation. Medicated cycles for OI were excluded. Our primary outcome was implantation rate (IR); secondary outcomes were ongoing pregnancy/live birth rate (OP/LBR), biochemical pregnancy rate (BCPR), and



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clinical loss rate (CLR). Baseline demographics were obtained: patient age, body mass index (BMI), day 3 follicle stimulating hormone (D3FSH), gravidity, parity, and endometrial thickness (EnT) at time of ovulation. Statistical analysis was performed using student t-test, Mann-Whitney U test for skewed data, and chi-square. Logistic multivariable generalized estimating equation (GEE) regression models were used to calculate odds ratios and to adjust for potential confounders, with $P < 0.05$ considered significant.

RESULTS:

660 patients met inclusion criteria and were included in the study; 47 underwent assessment of MLP and 613 did not undergo MLP assessment. There were no differences in demographics between the groups. The mean MLP in those assessed was 10.78ng/mL. Of those in the MLP group, 17/47 (36.17%) subsequently received supplemental progesterone; 14 received vaginal progesterone, while 3 utilized oral progesterone. In an unadjusted analysis, there were no significant differences in clinical outcomes between the groups. After adjusting for age, BMI, D3FSH, and EnT at time of ovulation, having mid-luteal progesterone evaluated did not predict IR (OR 3.65, 0.49-27.34, $p = 0.21$) or OP/LBR (OR 3.83, CI 0.46-31.71, $p = 0.21$). No differences in BCPR or CLR were observed.

CONCLUSIONS:

Our results demonstrate that MLP assessment does not appear to be associated with clinical outcomes in same-sex female couples undergoing natural cycles with DIUI. Our findings suggest that clinicians may reconsider the evaluation of the MLP within same-sex female couples who use DIUI, as it does not appear to enhance treatment outcome. Larger, prospective studies may further delineate the cost-benefit analysis of MLP assessment in this patient cohort.

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