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SINGLE EUPLOID EMBRYO TRANSFER OUTCOMES AFTER UTERINE SEPTUM RESECTION

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OBJECTIVE:

A septate uterus is the most common Müllerian anomaly. There is limited evidence supporting surgical versus expectant management of uterine septa. The objective of this study is to compare single euploid embryo transfer (SEET) outcomes in patients who underwent prior uterine septum resection to those with uteri of normal contour without Müllerian anomaly and without a history of prior uterine surgeries.

MATERIALS AND METHODS:

Cycles of patients with prior hysteroscopic uterine septum resection and underwent autologous SEET between 2012-2020 were included. A 3:1 ratio propensity score matched cycles without a history of uterine septa was used as the control group. Cycles were matched by age, anti-Müllerian hormone (AMH), and body mass index (BMI). Baseline demographics included age, BMI, gravity, parity, history of spontaneous abortions, duration of infertility, endometrial thickness at SEET, embryo quality, and cycle outcomes. Patients with uterine factors other than septa were excluded. Comparative statistics were performed using chi-square and students t-test. A multivariate regression analysis fitted with a generalized estimating equation was conducted to evaluate the association of prior septum resection and pregnancy outcomes.

RESULTS:

Sixty cycles in 35 septum patients were compared to 180 cycles in 154 controls. Septum patients had longer infertility duration (18.2±16 vs 12.9±77, p=0.02) and higher gravidity (1.68±1.21 vs1.11±1.24, p=0.002) but similar parity (0.33±0.57 vs 0.38±0.65, p=0.59) compared with controls. Septum patients had significantly lower rates of chemical pregnancy (58.33% vs 77.2%, p=0.004),implantation (41.67% vs 65.6%, p=0.001), and live birth (33.33% vs 57.8%, p=0.001) per transfer. No statistical difference in clinical pregnancy loss rates was found

comparing septum patients with controls (8.33% vs 7.8%, p=0.89). Additionally, after adjusting for gravidity, number of prior spontaneous abortions, duration of infertility, endometrial thickness at transfer, and embryo quality, there was a significant association between having a prior hysteroscopic septum resection and lower odds of implantation (aOR=0.46, CI 95%; 0.24-0.91) and live birth (aOR=0.40, CI 95%; 0.20-0.79).With these adjustments, there was no significant association between septum resection and miscarriage (aOR=1.58, CI 95%; 0.51-4.8).

CONCLUSIONS:

Patients with uterine septa and history of hysteroscopic resections are susceptible to suboptimal livebirth outcomes. Uncorrected uterine septa are associated with a higher incidence of miscarriage. However, miscarriage rates after resection are similar to normal uteri. Patients born with septate uteri should assess the value of surgical intervention prior to SEET to best optimize their reproductive outcomes.

IMPACT STATEMENT:

Uterine septa are the form of Müllerian anomaly most amenable to surgical correction. Despite corrective hysteroscopic septum resection, SEET outcomes were suboptimal. The best treatment approach for women with septate uteri remains to be determined.

REFERENCES:

N/A