IRRITABLE BOWEL SYNDROME HAS AN ADVERSE EFFECT ON PREGNANCY OUTCOMES IN PATIENTS UNDERGOING EUPLOID EMBRYO TRANSFER

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Background: Irritable Bowel Syndrome (IBS) is one of the most common gastrointestinal disorders and is most prevalent in women [1]. It has been associated with immunoinflammatory disturbances, such as cytokine dysregulation, which in turn, may have an impact on pregnancy [1,2]. There is, however, little literature about the effect of IBS on pregnancy outcomes.

Objective: This study evaluates the effect of IBS on pregnancy outcomes in patients undergoing single euploid embryo transfers.

Materials and Methods: This is a retrospective cohort study. The study group included patients who underwent single euploid embryo transfer with a diagnosis of IBS. The control group included patients without IBS who underwent single euploid embryo transfer during the same time period. Patients with uterine and severe male factor infertility were excluded. The primary outcome was live birth rate. Secondary outcomes included positive pregnancy rate, clinical pregnancy rate and miscarriage rate. Statistical analysis included paired t-test and mixed effects logistic regression. A p value of less than 0.05 was deemed statistically significant.

Results: There were 59 patients with IBS who underwent single euploid embryo transfer between 2018 and 2022. There were 1406 patients in the control group. The groups were similar for maternal age, BMI, type of transfer cycle (programmed vs. natural), gravidity, and peak endometrial stripe thickness. The positive pregnancy rate was 67.7% in the IBS group and 71.0% in the control group. The clinical pregnancy rate was 45.8% in the IBS group and 63.0% in the control group. The live birth rate was 40.8% in the IBS group and 56.3% in the control group. The miscarriage rate was 38.5% in the IBS group compared to 21.3% in the control group. The adjusted odds of clinical pregnancy was 52.1% lower in patients with IBS (OR 0.479, 95% CI: 0.27, 0.82). The adjusted odds of live birth was 47.8% lower in patients with IBS (OR 0.52, 95% CI: 0.30, 0.90). The adjusted odds of miscarriage was 2.32 times higher in patients with IBS (OR 2.32, 95% CI: 1.16, 6.45).

Conclusions: In patients who underwent single euploid embryo transfer, our study found that patients with IBS had a lower likelihood of clinical pregnancy and live birth when compared to patients without IBS. Patients with IBS also had a higher likelihood of miscarriage. Given this is a retrospective study, it is limited in its ability to fully assess the nutritional status of these patients. With little currently known about the effect of IBS on pregnancy outcomes, this study provides insight and suggests that IBS has an adverse effect on pregnancy outcomes.

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References:

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