

EP04.16. B-Ultrasound in evaluating endometrial receptivity during ovulation induction

Wei Zhang. Reproductive Endocrinology, Ob/Gyn Hospital of Fudan University, Shanghai, China

Introduction

To assess the value of B-ultrasound in evaluating endometrial receptivity (ER) in patients undergoing ovulation induction by correlating specific sonographic parameters with clinical pregnancy rates

Methods

A prospective cohort study was conducted on 150 women undergoing their first ovulation induction cycle. Transvaginal B-ultrasound was performed on the day of trigger injection to measure endometrial thickness (ET), pattern (echogenicity), and volume. Blood flow parameters, including pulsatility index (PI) and resistance index (RI) of the spiral arteries, were assessed via Doppler. Participants were followed, and clinical pregnancy was confirmed via ultrasound at 7 weeks

Results: The clinical pregnancy rate was 42%. A significant association was found between pregnancy and optimal endometrial parameters. The mean ET in the pregnant group was 9.8 ± 1.2 mm, compared to 7.1 ± 1.5 mm in the non-pregnant group ($p < 0.01$). A triple-line endometrial pattern was observed in 85% of pregnant patients versus 35% of non-pregnant patients. Furthermore, pregnant women had significantly lower uterine artery PI (2.1 ± 0.4 vs. 2.8 ± 0.6 , $p < 0.01$) and RI (0.78 ± 0.05 vs. 0.85 ± 0.06 , $p < 0.05$), indicating better perfusion.

Conclusion

B-ultrasound is a crucial, non-invasive tool for assessing endometrial receptivity during ovulation induction. Specific parameters—endometrial thickness ≥ 9 mm, a triple-line pattern, and favorable blood flow indices—are strongly associated with higher clinical pregnancy rates, providing valuable prognostic information for cycle management.

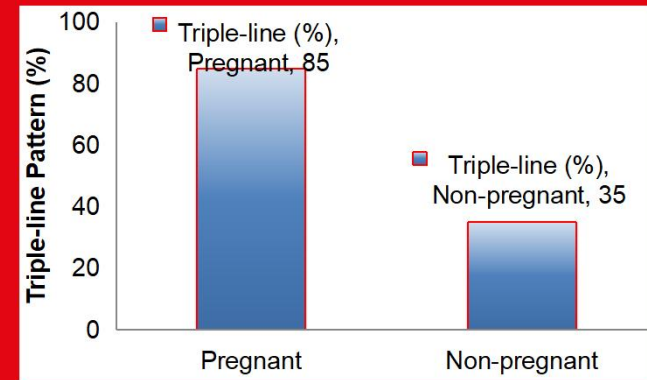


Fig.1 Comparison of Triple-line Pattern Between Pregnant and Non-pregnant Groups

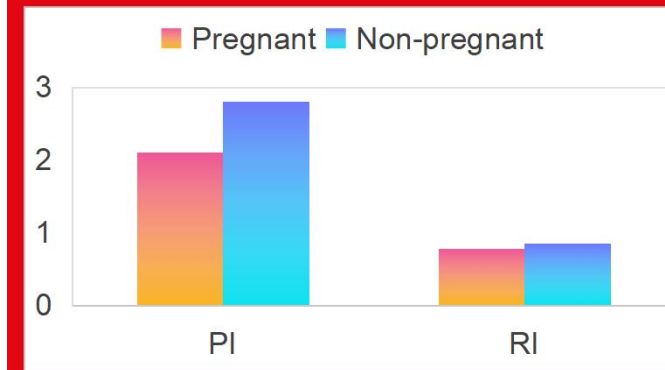


Fig.2 Comparison of Uterine Artery PI and RI Between Pregnant and Non-pregnant Groups