Correlation of Applebaum Scoring in predicting pregnancy outcome in infertility patients.

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Objective: We aimed to evaluate the correlation of Applebaum Scoring in predicting the outcome of pregnancy in spontaneous cycles in patients with unexplained primary infertility. Methods, Patients & Intervention: A prospective observational study was conducted in the Department of Obstetrics and Gynaecology, U.P. RIMS&R, India on 55 women with unexplained primary infertility after standard diagnostic work up. Ultrasound (TVS) measurement of all patients was performed in their midcycle of spontaneous cycle. Main Outcome Measures: The Uterine Biophysical Profile (UBP) were noted during the normal mid-cycle of these patients which included 7 parameters: Endometrial thickness in greatest AP dimension (full-thickness measurement), a layered ("5 line") appearance to the endometrium, myometrial contractions, myometrial echogenicity, uterine artery blood flow as measured by PI, blood flow within Zone 3 using color Doppler, myometrial blood flow seen on gray-scale examination. Applebaum Scoring i.e the "Uterine Scoring System for Reproduction" (USSR) was used to evaluate the total score. Results: Among 55 unexplained primary infertility cases, 24 (43.63%) conceived during serial ultrasonographic monitoring of spontaneous menstrual cycle and timed intercourse. According to Applebaum scoring, with a 'perfect score' of 20, there was 80% conception rate. While 9 /15 patients (60%) conceived with a score of 17-19. With a score of 14-16, 10 / 23 (43.37%) patients conceived. Only 8.33% conception rate was seen with a low score of 13 or less. Highest pregnancy rate (60%) was seen with an endometrial thickness of 7-9mm while zone IV (as per applebaum criteria) endometrial blood flow gave maximum conception rate of 66.66%.

Conclusion: Applebaum Score using UBP can prove to be a simple, rapid and non invasive tool to predict uterine environment and hence pregnancy outcome.