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PREDICTING CONCEPTION AND ENVISAGING PREGNANCY OUTCOME AMONG WOMEN WITH PCOS -PROBABILISTIC MODEL

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The Objective is to determine Probability of Natural Conception P(NC) among women with Polycystic Ovary Syndrome (PCOS) and to predict the Time to Pregnancy (TTP) for suggesting Mode of Conception (MoC) using software driven decision support system. This is an evidence-based prospective observational study. Pregnant women with history of PCOS were recruited on their first antenatal visit. They were classified into 3 cohorts based on non modifiable variables - Age, Age of menarche, Number of Abortions and Parity, using cluster analysis. Possible Green cohort group- 18 subjects, Promising Blue cohort group 8 subjects, Probable Red cohort group 4subjects. The modifiable variables included were BMI, mentrual cycle length, Number of days of menstrual flow, history of Diabetes Mellitus and Hypertension. The modifiable variables were nested for predicting P(NC) and TTP by Logistic regression. Survival plot was used for finding Time to Pregnancy. The Mode of Conception - ART /Natural Conception with probable Time to Pregnancy is provided. The Possible-Green group had the highest chance of natural conception p(NC) - 65% followed by the Promising Blue 55% and the Probable Red group 51%... ART is then suggested as the mode of conception when p(NC) is less than 67%. Our clinical predictive model aids in predicting p(NC) and TTP for each cohort. Our findings were validated with data of 24 other PCOS patients. It was noted that The model predicted 23/24 to opt for ART for conception with accuracy of 95.8%. The predicted

Our findings were validated with data of 24 other PCOS patients. It was noted that The model predicted 23/24 to opt for ART for conception with accuracy of 95.8%. The predicted TTP for p(NC) > 60% was assessed statistically and found that predicted TTP was not significantly different from actual.

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