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**Evaluation of maternal plasma kisspeptin-10 and its relation to altered reproductive hormones in preeclamptic pregnant women**Hisham Al-Matubsi<sup>1</sup>, Farqad B Hamdan<sup>2</sup> and Maysoun A Al-Kaabi<sup>3</sup><sup>1</sup>University of Petra, Jordan<sup>2</sup>Nahrain University, Iraq<sup>3</sup>Um Al-Baneen Center for Infertility Treatment and IVF, Iraq

To evaluate plasma Kisspeptin-10 (KP-10) and assess its relation to altered reproductive hormones in preeclamptic pregnant women. First time pregnant women n=100 at 20 weeks of gestation participated in this study and divided into pre eclampitics n=60 and normotensives n=40. KP-10, Luteinizing Hormone (LH), Follicle Stimulating Hormone (FSH), beta-Human Chorionic Gonadotropin ( $\beta$ -HCG), Estradiol ( $E_2$ ) and Progesterone (PRG) were evaluated during second and third trimesters of pregnancy for all women. Kisspeptin-10 levels were reduced in PE women compared with normotensive pregnancies. In 2<sup>nd</sup> trimester, area under Receiver-Operator Characteristic (ROC) curve was 0.662, positive and negative predictive values were 32.8 and 94.6 and test sensitivity and specificity were 55% and 87.5%, respectively. In the 3<sup>rd</sup> trimester, area under ROC curve was 0.747 positive and negative predictive values were 22.2 and 97.3 and test sensitivity and specificity were 83.3% and 67.5%, respectively. In PE patients, plasma KP-10 demonstrated inverse correlation with  $E_2$  (during the 2<sup>nd</sup> trimester), LH and FSH (during the 3<sup>rd</sup> trimester) and positively correlated with  $\beta$ -HCG (during the 3<sup>rd</sup> trimester). Relatively high KP-10 sensitivity with the largest area under the ROC curves during 2<sup>nd</sup> and 3<sup>rd</sup> trimester of pregnancy, suggesting that is statistically acceptable as a diagnostic screening tool to rule out the PE especially in 3<sup>rd</sup> trimester.

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