Sri Lanka College of Obstetricians & Gynaecologists

SUPPLEMENT ISSUE

SLJOG

The Sri Lanka Journal of Obstetrics and Gynaecology

57th ANNUAL ACADEMIC CONGRESS 2024

30th August to 1st September 2024

"Quality Healthcare Through Standards in Training and Service Delivery"- A right of all women.

Abstracts

Published by Sri Lanka College of Obstetricians and Gynaecologists

EP/O – 07

DIAGNOSTIC ROLE OF SERUM URIC ACID IN PREGNANCY INDUCED HYPERTENSIVE DISORDERS

Madhurahini, R[1], Balayasothini, V [2], Jeneni, J[2], Arasaratnam, V[1], Muhunthan, K[3]
[1]Department of Biochemistry, Faculty of Medicine, University of Jaffna, Sri Lanka
[2]Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna, Sri Lanka
[3]Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Jaffna, Sri Lanka

Introduction and objectives
Pregnancy related hypertensive disorders pose a significant effect on both maternal and foetal health. Early diagnosis and timely intervention with a reliable marker aid in improved healthcare outcomes. This study conducted to assess the diagnostic efficacy of serum uric acid to be used as a predictor in Pregnancy related hypertensive disorders, aiming to early diagnosis and to prevent associated complications.

Method
This is a population-based analytical cross-sectional study conducted at the Antenatal Clinic, Teaching Hospital, Jaffna. Consecutive sampling method was used to recruit participants among the pregnant women who were visiting for the routine monthly check up at antenatal clinic. A total of 68 pregnant women who satisfied based on the inclusion and exclusion criteria were selected. Pregnant women those who were in 24th to 36th weeks of gestation with blood pressure on two or more occasions having normal of 120/80 mmHg (Group 1= 34nos) and Pregnancy induced hypertension (PIH) of 140/90 mmHg and without proteinuria (Group 2= 34nos) were selected, while those on diuretics, immune-suppressing drugs, with kidney diseases (glomerulonephritis, kidney failure), kidney infection and hyperthyroidism were excluded. Blood samples were collected to estimate serum uric acid levels by uricase method. Ethical approval was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna. Independent sample t-test and ROC curve (SPSS version 25.0) were used to evaluate the diagnostic performance of serum uric acid levels.

Results
Serum uric acid level was ranged from 1.73-3.84 and 3.38-6.77 mg/dL in Group 1 and Group 2 women respectively. Mean serum uric acid level of PIH women was 4.66 (±0.89) mg/dL and was significantly higher ($p<0.001$) than that of pregnant women with normal blood pressure (3.04 ±0.49 mg/dL). The area under curve (AUC) of ROC curve was 0.969 with the sensitivity and specificity of 91.2% and 94.1% respectively. The cutoff value for serum uric acid level was ≥ 3.66 mg/dL.

Conclusion
Findings showed that serum uric acid concentration had better diagnostic efficacy for hypertensive disorders with significantly elevated levels in those with PIH. High AUC, along with substantial sensitivity and specificity values validated the predictive ability of serum uric

acid in clinical setup for early diagnosis and timely intervention for Pregnancy related hypertensive disorders.