

Pre-eclampsia is defined as hypertension associated with proteinuria arising *de novo* after the 20th week of gestation in a previously normotensive woman and resolving completely by the 6th postpartum week. It is a major cause of morbidity and mortality during pregnancy. There are many ways to diagnose the disease, based on clinical diagnosis and conduct some tests; measurement of the amount of protein in urine sample that had been collected for a period of twenty-four hours. Evaluate urinary K⁺ to creatinine ratio as a diagnostic and screening test in PE.

Our study was carried out at Babylon Teaching Hospital for Gynecology and Pediatrics, in Babylon Province, Hilla City from February-August- 2016. The total number of all cases was 88,44 among them women with normal pregnancy, 44 cases with PE. Every patient was sent for urinary K⁺ and creatinine in spot urine which both were determined by ion selective electrode and Moorehead and Briggs derived *O*-Cresol Pthalien Complexone method respectively, and the ratio K⁺ to creatinine were calculated. Data are given as mean \pm SD, and t-test were used as statistical method to test the result. Urinary K⁺/creatinine ratio was significantly higher in patients with pre-eclampsia compared to control groups (*P value* <0.01). The sensitivity of urinary K⁺/creatinine ratio to detect PE was (77%) while, its specificity was (68%). Urinary K⁺/creatinine ratio is significantly increase in preeclamptic women.