**Original article:**

**Evaluation of blood urea, creatinine and uric acid as markers of kidney functions in hypertensive patients: a prospective study**

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**ABSTRACT**

**Introduction:** Hypertension is one of the leading contributors towards the adverse effects on kidneys.Renal dysfunction can be studied by the measurement of biochemical parameters in blood; hence we carried out this study to examine the status of blood urea, creatinine and uric acid as the possible markers for the renal functions in hypertensive patients.

**Materials and methods :** 90 patients,clinically diagnosed to be hypertensive and who were under regular visit to OPD, were included in this study. 30 age and sex matched healthy individuals were recruited as the control group in our study. Fasting venous blood samples were collected from the patients as well as the controls and they were analysed by using an automated analyser for blood urea, creatinine and uric acid. The results were analysed statistically by using the Student’s “t” test and correlation coefficients.

**Results :** The levels of blood urea, creatinine and uric acid were significantly higher in hypertensive patients as compared to healthy controls (p value <0.001). We further evaluated the status of our study parameters in our hypertensive patients group by dividing them according to their stages based on the classification given by Joint National Committee (JNC) VII report. We found a positive correlation in the levels of blood urea, creatinine and uric acid with the severity of the disease.

**Conclusion :** The clinical investigations of renal functions such as blood urea, creatinine and uric acid are important to identify the renal dysfunctions in hypertensive patients especially in a setting where facilities for the definitive elaborate renal assessments are not feasible.

**Key words :** Kidney functions, hypertension