ABSTRACT:

Background: Preeclampsia is a systemic disorder that affects multiple organs and is characterized by the new onset of hypertension and proteinuria or end-organ dysfunction or both in the second half of pregnancy. Kidney is one of the severely affected organs in preeclampsia. One of the biomarkers of kidney injury is Neutrophil Gelatinase Associated Lipocalin (NGAL). NGAL is a 25-kDa peptide of the lipocalin family. Rise of NGAL levels has been recognized in the plasma and urine of animal models of ischemic and nephrotoxic acute damage to the renal system.

Aim: This study was done with the aim of comparing the serum NGAL levels in patients with preeclampsia and in gestational age matched normotensive controls:

Materials and methods: Forty preeclamptic pregnant women and forty gestational age matched normotensive controls were included in the study. Presence of 140 mmHg and above systolic and 90 mmHg and above diastolic blood pressure which emerges after 20th gestation week, urine protein creatinine ratio more than 0.3 were used as diagnostic criterion for preeclamptic pregnant women. Measurements of serum NGAL was performed with enzyme linked immunosorbent assay (ELISA).

Results: The basic characteristics were comparable between both groups. Systolic blood pressure, diastolic blood pressure, serum uric acid, urine protein creatinine ratio are shown in are higher in cases when compared with the control population. The serum
NGAL level appears to be equally distributed in both the cases and controls. The t-test does not show any significant difference in NGAL levels in these two groups. (p-0.062).

**Conclusion:** Serum NGAL levels are not significantly elevated in patients with preeclampsia when compared with the normotensive controls. There is no significant correlation between serum NGAL levels and systolic blood pressure, diastolic blood pressure, serum uric acid, urine PCR, maternal age and gestational age.

**Keywords:** preeclampsia, Neutrophil Gelatinase Associated Lipocalin, kidney injury