

## URINARY NO LEVELS ARE DECREASED IN PREECLAMPSIA

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**Objective:** Nitric oxide (NO) is a potent vascular endothelial cell derived vasorelaxant with important effects on vascular tone. It was aimed to assess maternal blood and urine nitric oxide (NO) levels and serum uric acid concentration in preeclampsia.

**Study design:** Thirty preclamptic and thirty-one healthy women with singleton pregnancy were studied in the third trimester. Maternal venous blood and 24 hour urine were collected from all subjects prior to birth. Serum and urine nitric oxide levels were determined with the greiss reaction by measuring combined oxidation products of nitric oxide, serum nitrite and nitrate after reduction with nitrate reductase. Independent t test was used for statistical significance.  $p < 0.05$  was set for significance.

**Results:** Patients' ages and gestational weeks were not different in both groups ( $p > 0.05$ ). There was no difference in maternal serum nitric oxide levels between groups (preclamptic group  $46,9 \pm 8,8$   $\mu\text{mol/L}$ , control group  $41,2 \pm 14,6$   $\mu\text{mol/L}$ ,  $p > 0.05$ ). Urine levels were significantly lower in preclamptic group (preclamptic group  $365,5 \pm 41,9$   $\mu\text{mol/L}$ , control group  $719,1 \pm 80,2$   $\mu\text{mol/L}$   $p < 0.001$ ). Serum uric acid concentration was higher in preeclampsia groups (preclamptic group  $6,83 \pm 1,65$  mg/dl, control group  $4,58 \pm 1,17$  mg/dl) significantly ( $p < 0.01$ ). Decreased NO and creatinin clearens were observed (preclamptic group  $8,1 \pm 1,5$  ml/dk vs  $19,2 \pm 6,2$  ml/dk, control group  $85,5 \pm 25,9$  ml/dk vs  $122,0 \pm 19,5$  ml/dk respectively,  $p < 0.01$ ).

**Conclusions:** Circulating levels of nitrite in preeclampsia are not different from healthy pregnant women in the third trimester. But urine levels of nitrite is significantly lower in preeclampsia. Also serum uric acid levels were markedly elevated in preclamptic group and always accompanied with decreased urine NO levels. These data suggest that renal clearance of NO may have a direct role in NO metabolism in preeclampsia. Decreased NO and creatinin clearance should be due to the effect of preeclampsia on the renal function in those patients.