**INTRODUCTION AND AIMS:** Plasma urotensin II (UII) and tissue urotensin II expression were higher in patients with severe preeclampsia (SPE). We hypothesized that UII may induce preeclampsia by enhancing placental autophagy via many mechanisms.

**METHODS:** A total of 67 pregnant subjects were recruited, including 31 healthy pregnancies and 36 preeclamptic patients (6 patients with mild preeclampsia and 30 patients with severe preeclampsia). The clinical characteristics and biochemical data of the control subjects and preeclamptic patients are collected. Expressions of UII and autophagic markers in placenta specimens were performed by immunohistochemistry (IHC) and western blot.

**RESULTS:** Immunohistochemical analyses show that the expressions of UII and autophagic markers were mainly located in the cytoplasm of placental trophoblastic cells and syncytiotrophoblast cells. Western blot and IHC analysis both indicated that the expression of UII was significantly correlated with autophagic marker LC3II (r = 0.495, P = 0.0102; r = 0.416, P = 0.0077). Moreover, SPE group have higher expression of UII and LC3II, lower expression of P62 than that normal controls. The expression of UII and LC3 II have positive correlation with systolic blood pressure and urinary protein (systolic blood pressure (r = 0.501, P = 0.003) and urine protein quantitation (r = 0.509, P = 0.022), whereas P62 has negative correlation with SBP.
CONCLUSIONS: We verify that UII has positive correlation with autophagic marker in placentas of preeclampsia patients; besides, autophagic levels are positively correlated with systolic blood pressure and urine protein in patients with severe preeclampsia.