

THE URINARY UROMODULIN CREATININE RATIO IS DECREASED 6 WEEKS POST-PARTUM IN WOMEN WITH PREECLAMPSIA

Introduction:

Preeclampsia is a hypertensive disorder associated a greater lifetime risk for cardiovascular and renal disease. The mechanisms responsible for this adverse prognosis are not fully elucidated. The implication of **uromodulin** as an important factor affecting sodium balance, hence blood pressure regulation and kidney function is increasing.

We hypothesized that preeclampsia would be associated with urinary uromodulin excretion in the post-partum period.

Our objective was to assess urinary uromodulin excretion in the post-partum period in women with or without preeclampsia.

Methods

- Cross-sectional case-controlled multi-centric study
- Demographic data and urinary analyses were performed 6 weeks post-partum
- The Wilcoxon rank-sum test or a t-test were used to compare the variables in the two samples depending on the distribution the variable of interest.

RESULTS

Figure 1: Uromodulin/creatinine ratio

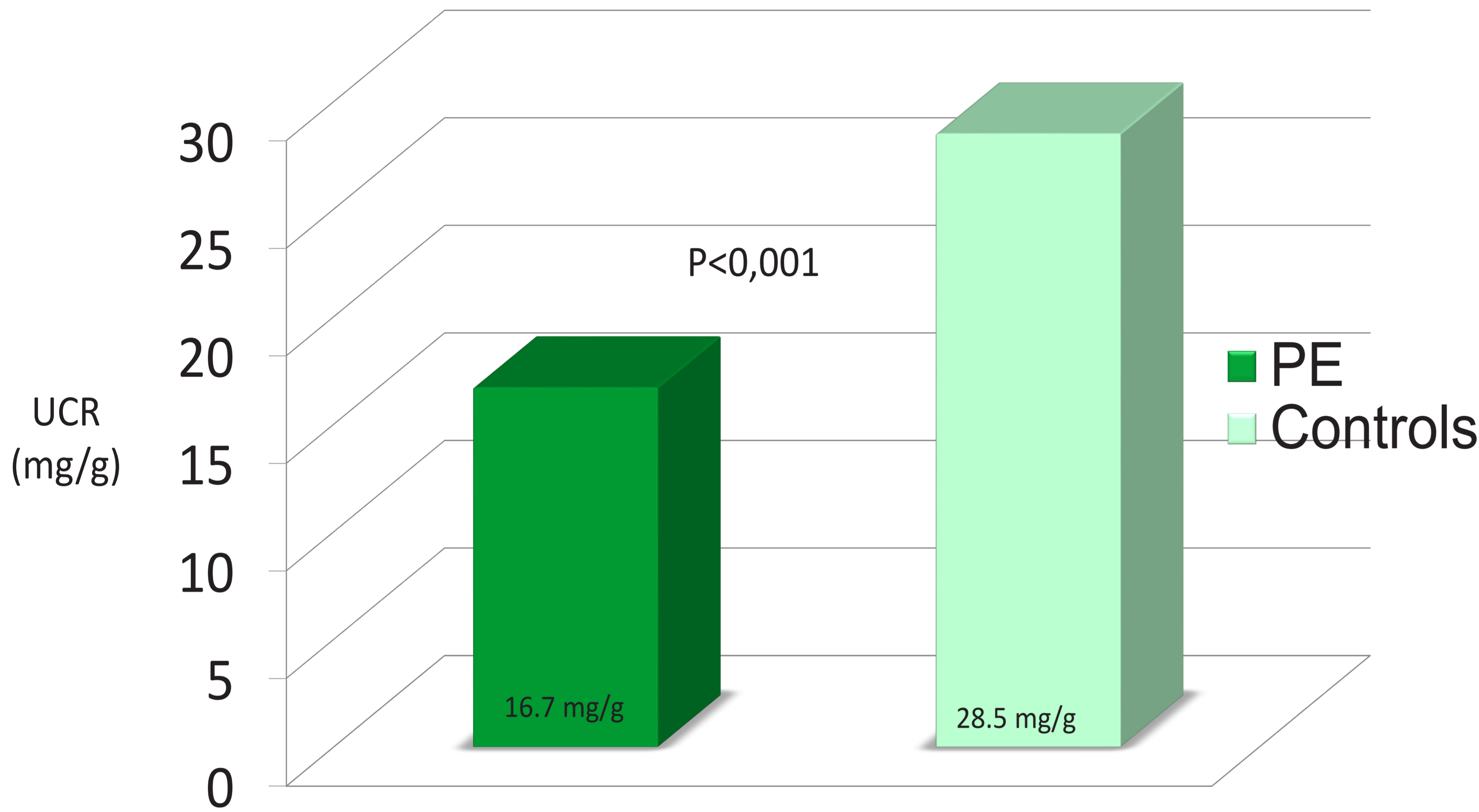


Table 1: Demographic characteristics

	PE	CONTROLS
N	429	50
Age (years)	33,2±0.58	32,4±0.27
BMI (kg/m ²) before pregnancy	24,6±0.24	21,6±0.44*

Results

6 weeks after delivery

- The urinary uromodulin creatinine ratio (UCR) was lower in women with preeclampsia (PE) compared to controls. *Figure 1*
- The urinary albumin creatinine ratio was higher in women with preeclampsia. *Figure 2*
- The systolic and diastolic blood pressures were higher in women with preeclampsia. *Figure 3*
- In univariate analysis, UCR was positively associated with age and negatively with diastolic blood pressure, albumin creatinine ratio and BMI at 6 weeks.
- In multivariate linear mixed model analysis, UCR was independently associated with preeclampsia, age, and estimated glomerular filtration rate.

Figure 2: Albumine/creatinine ratio

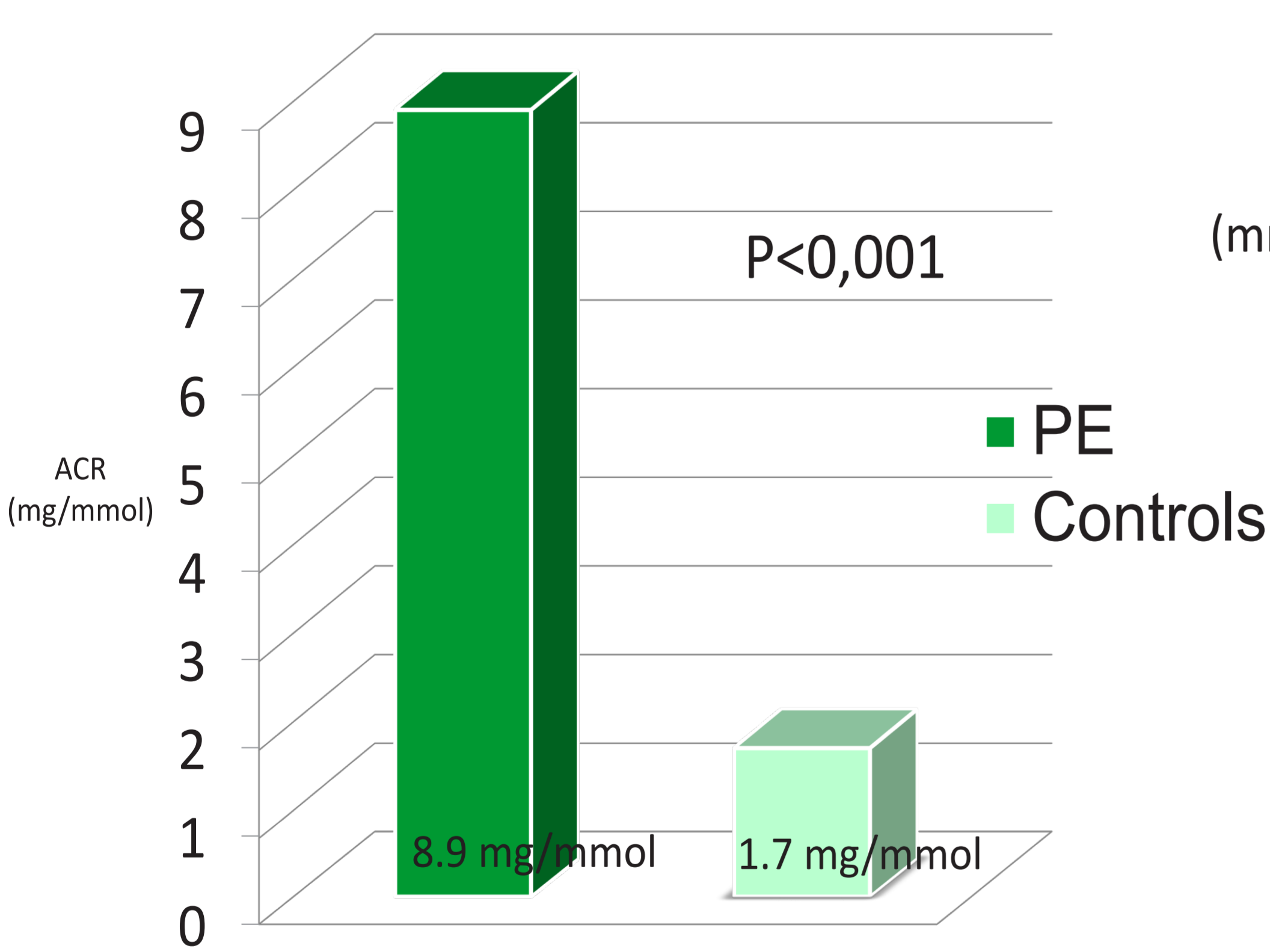
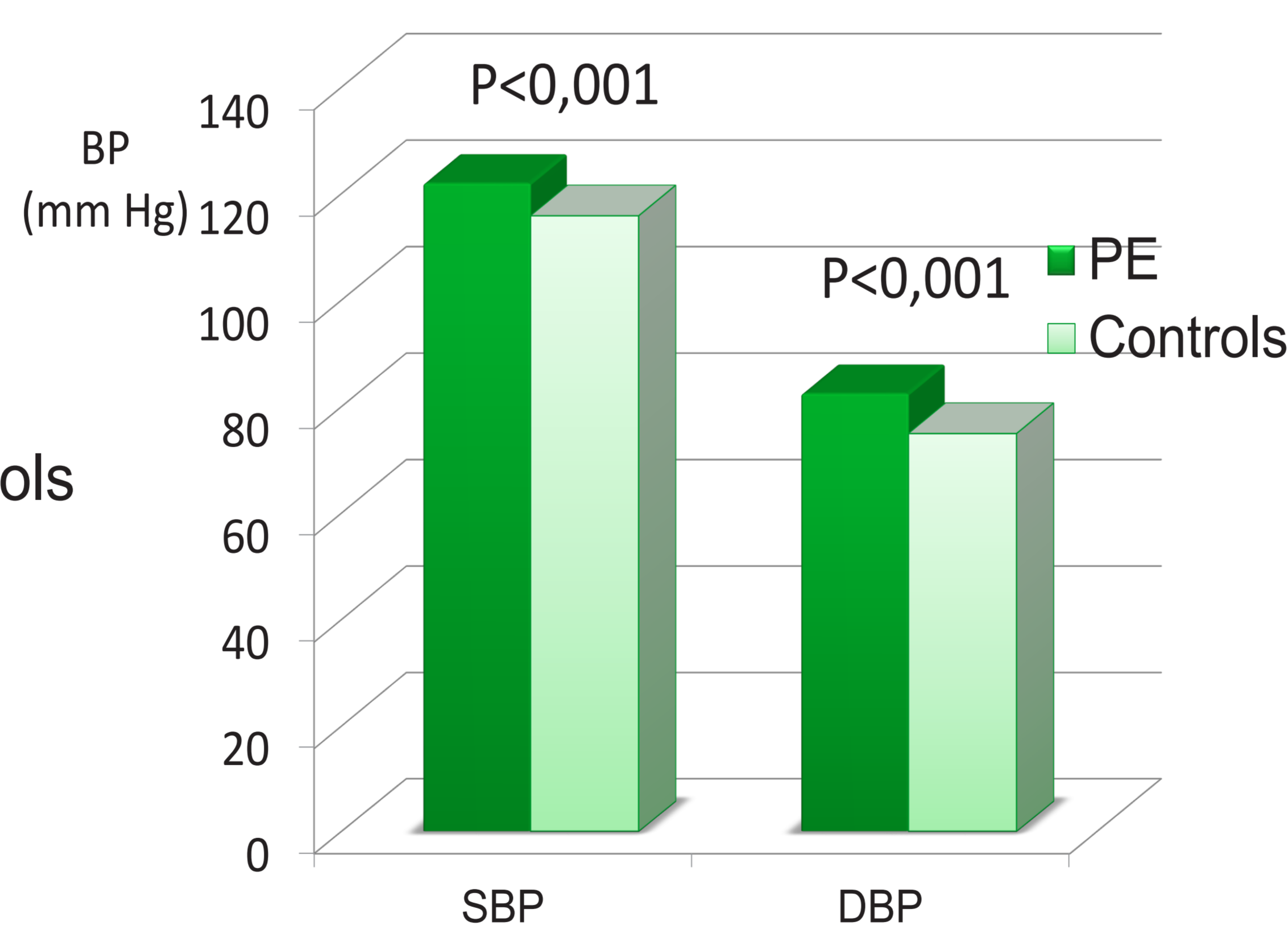


Figure 3: Systolic and diastolic blood pressures



Conclusion

In the post-partum period, women with preeclampsia have lower urinary uromodulin excretion than controls. Whether low urinary uromodulin excretion is a predictor of future adverse cardiovascular or renal outcome in these women will required longitudinal studies.

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