

INTRODUCTION

Aqueous extracts of *Salvia miltiorrhiza* Bunge root (*S. miltiorrhiza*) is one of the most commonly used traditional Chinese herbs in cardiovascular and chronic renal diseases treatment. It improves microcirculation through vasodilatation, suppresses thromboxane formation, inhibiting platelet adhesion and aggregation, and has antifibrotic effects. It is widely used either alone or in combination with other herbal ingredients in both China and other countries including the United States.

METHOD

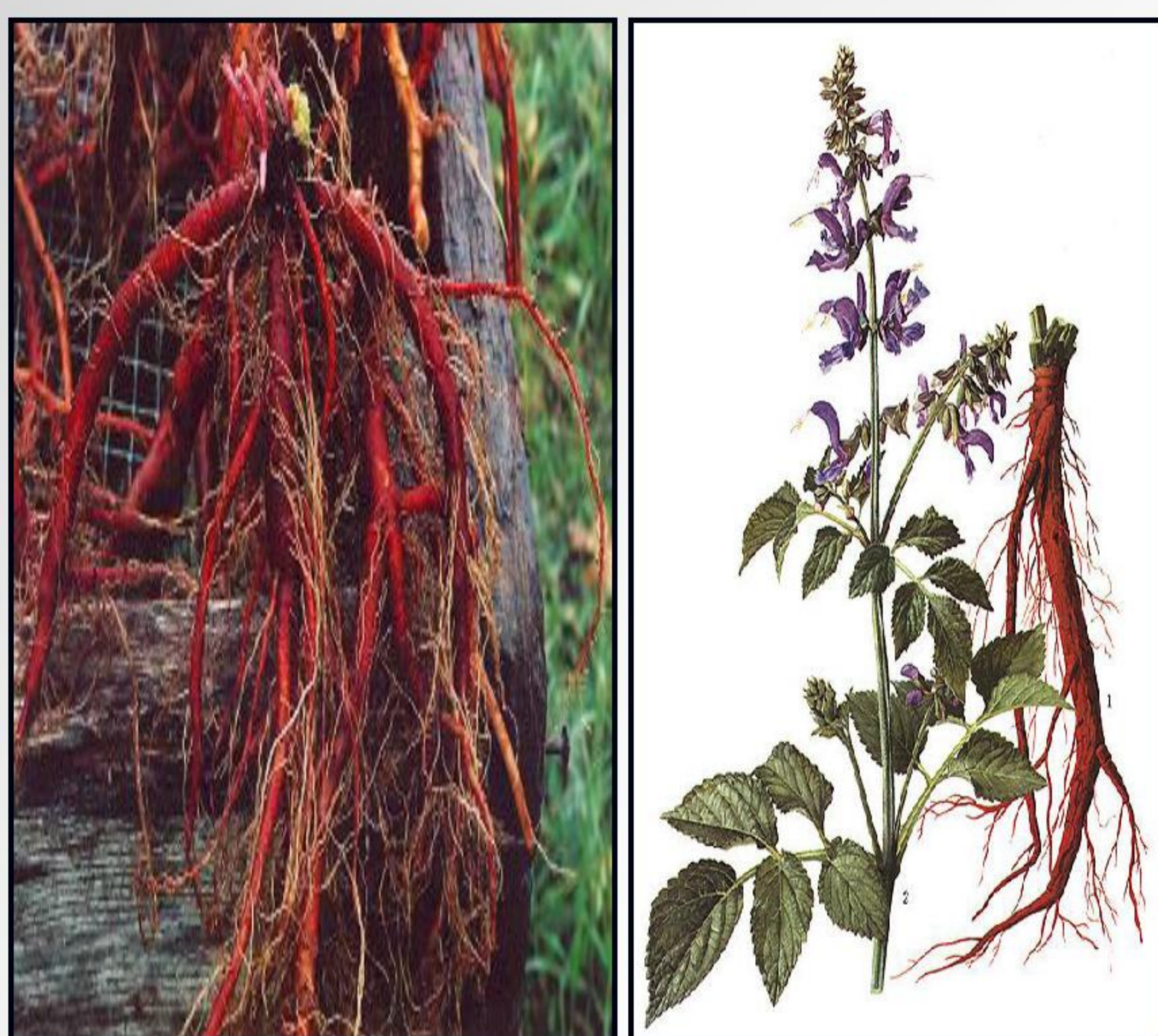
Male Wistar rats were submitted to partial ureteral unilateral obstruction and right nephrectomy (PUONx), divided in two groups and studied along eight weeks:

- Control (PUONx): PUONx+ control vehicle (saline)
- *Salvia miltiorrhiza* (PUONx-S): animals received orally *Salvia miltiorrhiza* aqueous extract (100 mg/kg b.w.) daily by gavage

We measured 24h-proteinuria, microalbuminuria and urine NGAL (neutrophil gelatinase associated lipocalin). Histopathologic study of obstructed kidneys was made.

The statistical significance of the results was evaluated by ANOVA followed by Tukey test. Values were expressed as mean \pm SD.

RESULTS



Salvia miltiorrhiza Bunge root (*S. miltiorrhiza*)

24h Proteinuria

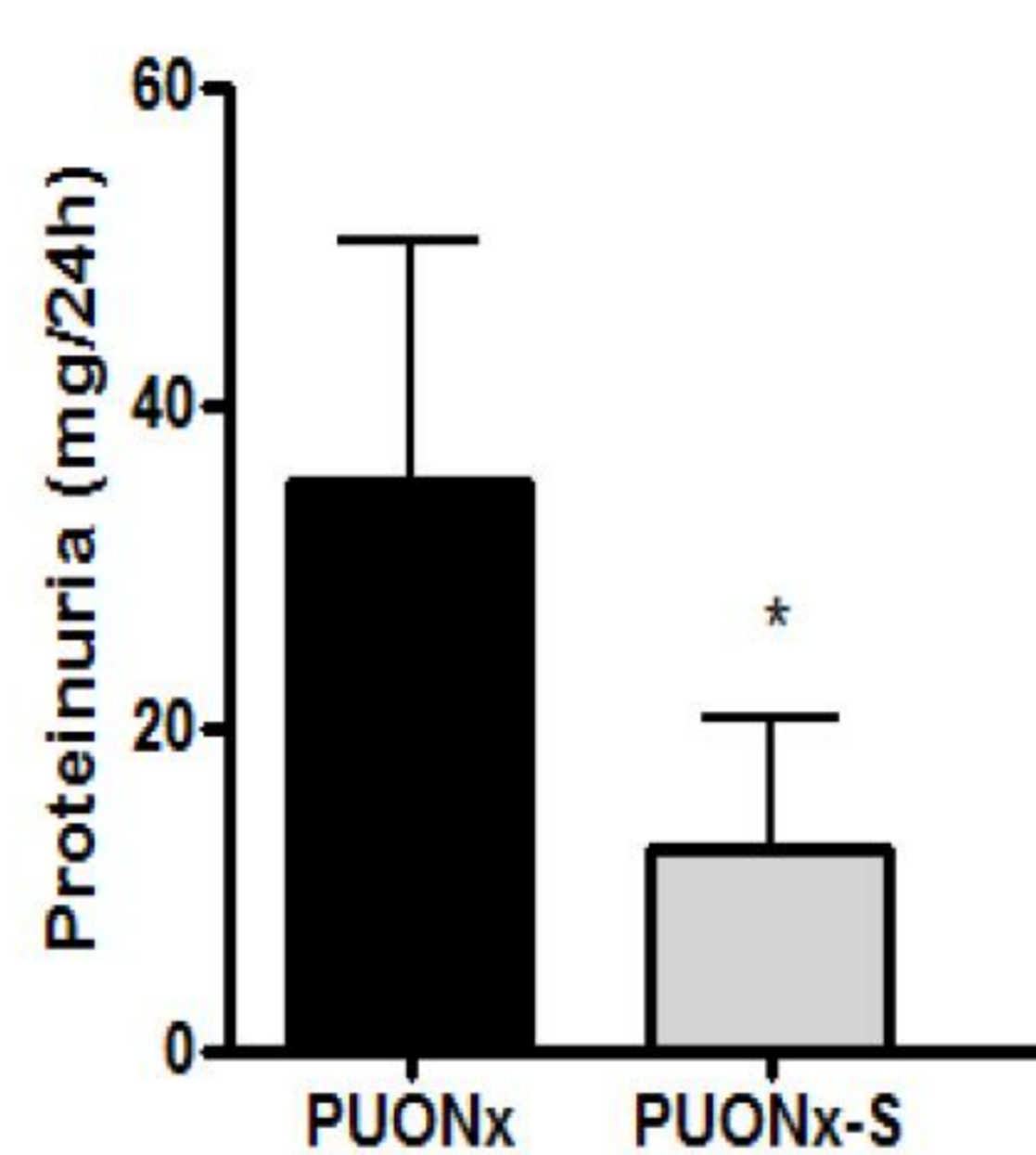


Figure 1: Values of 24h-proteinuria *p<0.001 vs PUONx

Microalbuminuria

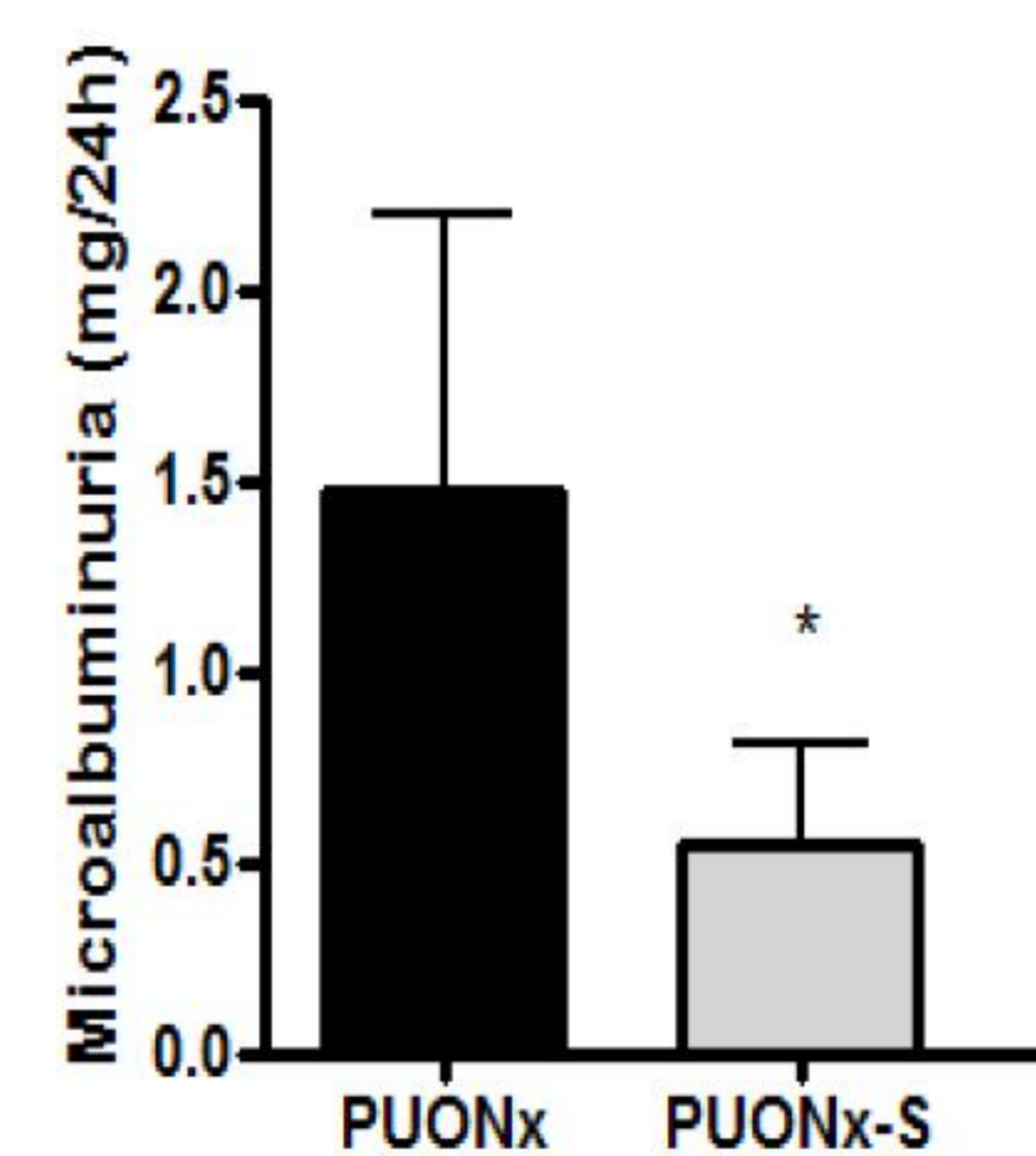


Figure 2: Values of 24h-microalbuminuria *p<0.007 vs PUONx-S

NGAL

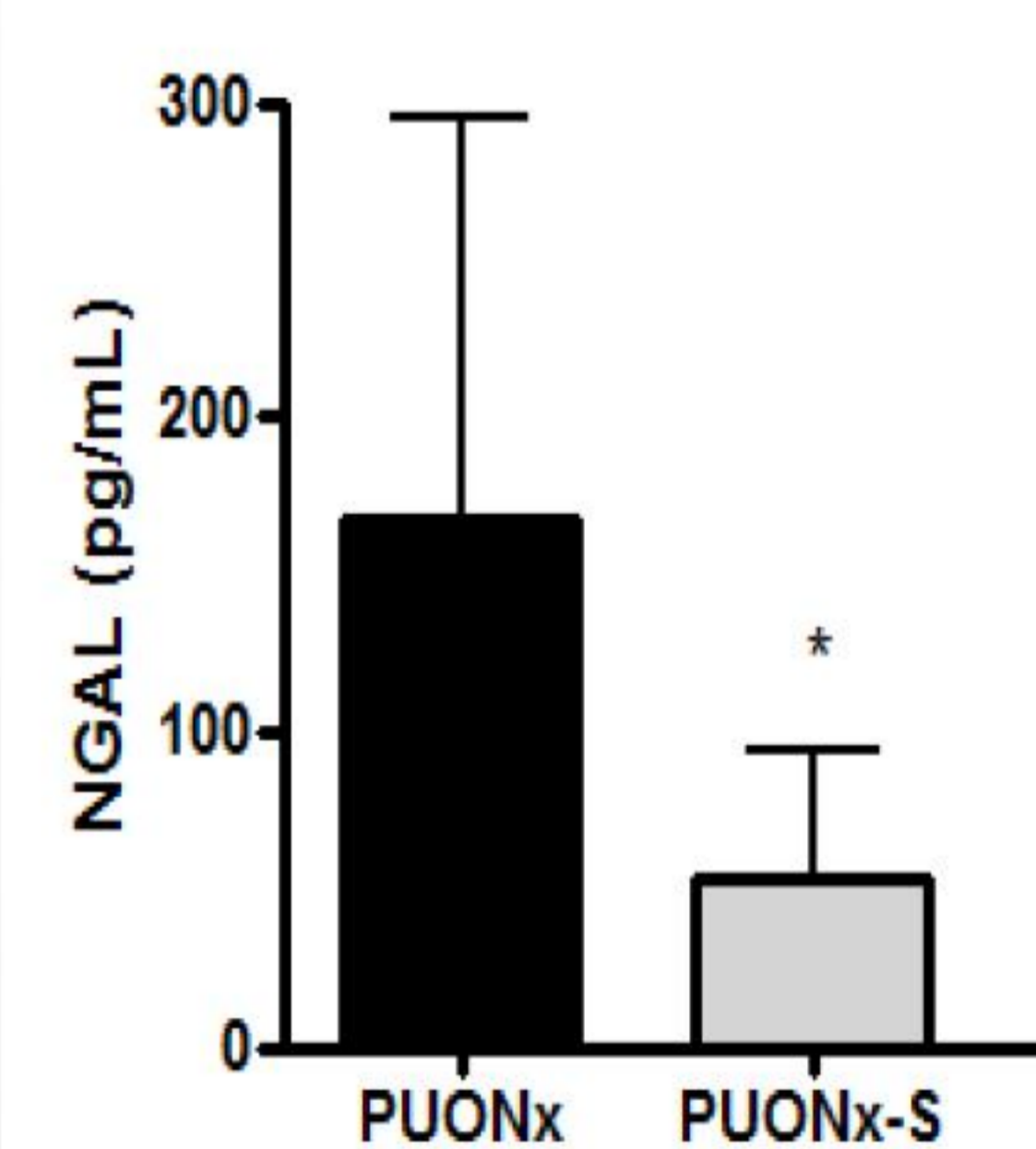


Figure 3: Values of NGAL *p<0.02 vs PUONx

Renal histopathology

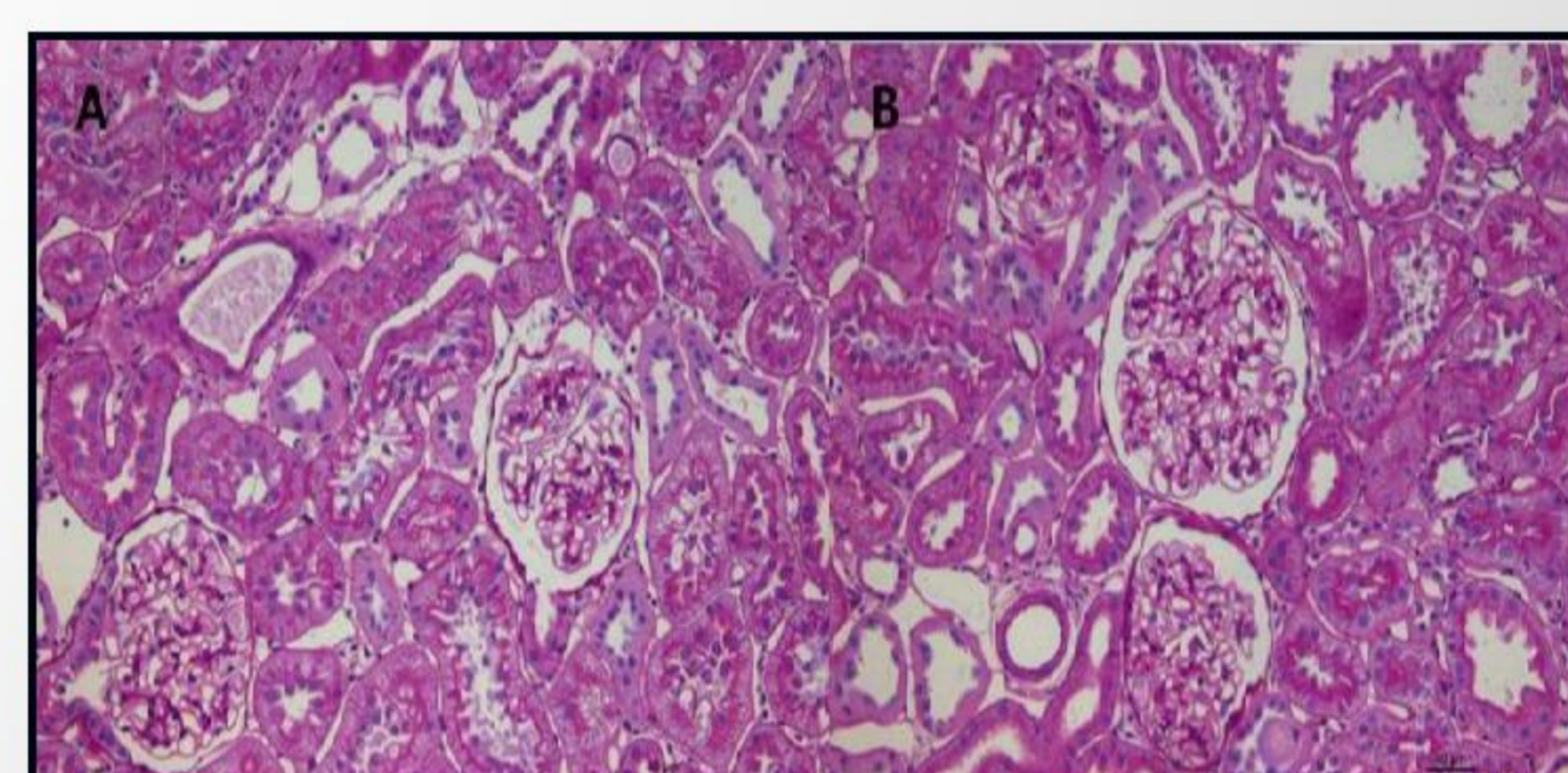


Figure 4: Renal histopathology: A) PUONx; B) PUONx-S.

AIMS

The aim of this study was to investigate the effects of aqueous extracts of Radix *Salvia miltiorrhiza* Bunge in an experimental model of partial ureteral unilateral obstruction in rats.

CONCLUSIONS

Salvia miltiorrhiza had a beneficial effect on renal function of treated PUONx animals evidenced by normalization of proteinuria and lower urinary levels of NGAL. Our results suggest that *Salvia miltiorrhiza* aqueous extracts could be beneficial in the treatment of partial ureteral unilateral obstruction.