

Diuretic properties of Orthosiphon stamineus Benth.

ABSTRACT

Ethnopharmacological relevance: *Orthosiphon stamineus* has been used in traditional medicine for centuries especially to treat diseases of the urinary system. Aim of the study: To investigate the diuretic activity, to elucidate its possible mechanism and to evaluate the renal effects of *Orthosiphon stamineus* extract. Materials and methods: Water extracts were administered orally at doses of 5 and 10 mg/kg to Sprague-Dawley rats and the control groups were given commercial diuretic drugs either furosemide or hydrochlorothiazide at 10 mg/kg. Urine volume, urine pH, urine density and urine electrolytes were determined every hour for 4 h. Blood was assayed for glucose, albumin, blood urea nitrogen (BUN) and creatinine. Results: *O. stamineus* extract exhibited dose-dependent diuretic activity. However, excretion of Na⁺ and Cl⁻ was not markedly elevated, but urinary excretion of K⁺ was significantly increased. *O. stamineus* extracts slightly increased the serum BUN, creatinine and blood glucose level. Although these levels were statistically significant when compared to control, these levels were still within normal range. Conclusions: *O. stamineus* exhibited diuretic activity, but was less potent than furosemide and hydrochlorothiazide. Care should be taken when consuming this herb as slight increase of kidney function enzymes was recorded.

Keyword: Diuretic; Electrolytes; *Orthosiphon stamineus*.