

Diuretic activity of *Ageratum conyzoides* extract in rats

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Abstract

The diuretic effect of the aqueous extract of the leaves of *Ageratum conyzoides* was evaluated in albino Wistar rats. Thirty rats in six groups were used for the study. Aqueous extract at three dose levels (200,400 and 600mg/kg), Frusemide and Acetazolamide were used as standard drugs while distilled water was used for control. Parameters studied included total urine volume after 24 hours, pH and urine concentration of sodium, potassium and chloride ions. We found LD₅₀ to be greater than 5000mg/kg. The leaf extract exhibited significant ($P<0.01$) diuretic activity. At the end of 24 hours, 200, 400 and 600mg/kg of extract produced 7.60 ± 0.68 , 7.00 ± 0.45 and 6.80 ± 0.49 ml of urine respectively. The pH of urine produced by the extract and standard drugs were all alkaline. At a dose of 600mg/kg body weight, there was significant ($P<0.01$) increase in concentrations of sodium, potassium and chloride ions. This could be important in the treatment of cardiovascular diseases such as hypertension. The results suggested that the leaf extract of *A. conyzoides* has diuretic properties similar to Acetazolamide.

Keywords: *Ageratum conyzoides*; diuretic; urine electrolytes

Introduction

Ageratum conyzoides is a tropical plant that is common in West Africa and some parts of Asia as well as Brazil (Shirwalkar *et al.*, 2003). It is an annual herb which grows erectly to approximately 1 meter in height and producing flowers of purple, pink to white, less than 6mm in diameter. About 30 to 50 flowers are arranged in close terminal inflorescences. The stems and leaves are curved and covered with fine white hair with the leaves being ovate and up to 7.5cm long. The plant has photoblastic easily dispersible seeds which are ovate, about 7.5cm long and lost in about 12 months. It grows abundantly in both Africa and Australian continents during wet season. The plant grows well in garden soils near to places of habitation as well as in waste places, abandoned farmlands or ruined sites. The plant easily adapts to different ecological conditions and has great morphological variation. It has a particular odour likened to an Australian male goat from where it got the name 'goat weed' or 'billy goat weed' (Okunade, 2002).