E2-18 Diuretic action of *Asparagus racemosus*

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Asparagus racemosus (S: Hathawariya) of the Family Liliaceae is often recommended by Ayurvedic and folk medical practitioners in Sri Lanka for the alleviation of various disease conditions, including kidney diseases. Previous studies with the crude aqueous extract of *A. racemosus* have confirmed that this plant possesses significant diuretic activity when given orally to both rats and normal human subjects. Investigations were undertaken to isolate and identify the active component/s responsible for the diuretic activity of this plant.

Sequential extraction of the powdered mature aerial parts of *A. racemosus* was carried out in a Soxhlet extractor using the following solvents: petroleum ether, dichloromethane, ethylacetate, methanol and water (3 l/kg) for a period of approximately 7 h with each solvent. Each fraction was investigated for its diuretic activity using Sprague Dawley rats as the experimental model. Each fraction (10g/kg equivalents in distilled water) was administered to the animals via the intragastric route with the control group of animals receiving the same volume of distilled water. Animals were kept individually in metabolism cages and urine was collected during the 6 h period following the administration of the drug or distilled water.

Concentrations of sodium and potassium ions in urine were determined using the flame photometer. Urine and serum osmolality were determined using the osmometer. Osmotic clearance and free water clearance were calculated.

Of the 5 fractions tested, only the group treated with the methanol fraction exhibited significant diuretic activity. Chemical screening showed that the methanol fraction contained saponin-type glycosides and alkaloids.

It can be concluded that the diuretic activity of *A. racemosus* is mediated through its saponin glycosides or alkaloids or a combination of the 2 components.

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