

Articles

EVALUATION OF TRINIDAD AND TOBAGO TRADITIONAL MEDICINE I: EFFECTS OF TRADITIONAL FOLK REMEDY ON DIARRHOEA.

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ABSTRACT

Hot aqueous extract of the bark of *Anacardium occidentale* (Cashew), commonly used in Trinidadian folk medicine for the treatment of diarrhoea was evaluated for antidiarrhoeal activity. The extract inhibited castor oil-induced diarrhoea in rats as judged by a decrease in the number of wet faeces in the extract-treated rats. The extract also inhibited the propulsive movement of intestinal contents in mice. The extract showed no direct effect on the isolated guinea-pig ileum, however, it inhibited in a dose-related manner the contractile effects of acetylcholine, histamine, and 5-hydroxytryptamine. The inhibitory effects on these agonists were non-competitive in nature. Phytochemical tests revealed the main constituents as tannin, steroids, triterpenoid and carbohydrates. The results indicate that action of *A. occidentale* bark extract could be through a combination of inhibition of elevated transmitter released and reduced propulsive movement of the small intestine. There is merit in the folk medicinal use of the extract.

INTRODUCTION

Anacardium occidentale Linn (Anacardiaceae) is an evergreen tree found in countries geographically located between the Tropics of Cancer and Capricorn (1). The tree has gnarled spreading branches and the fruit is kidney shaped. In Trinidad, it is found in abundance in the central and northern areas of the Island. Natives consume both the fruit and nut as a delicacy while some "brew" the bark of the tree as tea for the treatment of diarrhoea. Other uses of the plant include the use of the leaves and fruits for arthritis, colds, and steam therapy for malaria (2), and the use of a strong decoction of the tree bark alone or with Malomay (*Euphorbia hirta*) for diarrhoea and dysentery (3,4). Also, the crude extract of *A. occidentale* is used traditionally in Nigeria for the treatment of infectious and septic diseases in both humans and animals (5).

With no scientific report on the antidiarrhoeal activity of the plant, it was therefore decided to evaluate the antidiarrhoeal activity of the hot aqueous extract of the bark of *A. occidentale*.

MATERIALS AND METHODS

Plant material: Fresh bark of *Anacardium occidentale* (Cashew) was collected from the University of the West Indies (U.W.I.) Field Station, Mount Hope, Trinidad. The identity of the plant (TRIN 19601) was established by Mrs. Yasmin Comeau, curator of the National Herbarium U.W.I., St. Augustine, Trinidad. Voucher specimens documenting this collection are deposited in the National Herbarium, UWI, St. Augustine, Trinidad. After collection, the fresh bark was chipped into small pieces.

Preparation of extract: A hot aqueous extract of the bark of this plant was obtained by boiling 73.2 g of chipped bark in 300 mL of distilled water for 20 min. After cooling at room temperature and filtering, the dried solid content of the extract was determined to be 41.3 mg/mL. The extract was used fresh or stored at -20°C with no preservative until needed.

Phytochemical tests: The freshly prepared extract of *A. occidentale* was analyzed by the method of Trease and Evans (6).

Animals used: The animals used for the experiments were Sprague-Dawley rats weighing between 180 and 250 g, albino mice (20 to 25 g) and guinea pigs (250 to 400 g) of either sex. The animals were bred and maintained at the animal house, School of Veterinary Medicine, Faculty of Medical Sciences, EWMSC, Mount Hope, Trinidad. The animals were maintained at uniform laboratory conditions in standard steel cages and were provided with standard commercial livestock feed and water *ad libitum*. The guinea pigs were also given green grass. All studies were carried out using six animals in each group.

Acute toxicity test: The intraperitoneal LD₅₀ of the extract in mice was determined using the method of Lorke (7).

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