

Antidiarrhoeal activity of decoction of *Scoparia dulcis* in rats

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Abstract

The aim of this study was to investigate the antidiarrhoeal potential of a decoction (D) made from *Scoparia dulcis* Linn (Family: Scrophulariaceae), as indicated by traditional practitioners in Sri Lanka; using the castor oil-induced diarrhoeal rat model. Different doses of D (500, 1500, 3000 mg/kg) were orally administered and antidiarrhoeal activity monitored over a 6 h period. The D induced a significant ($P < 0.05$) and dose-dependent antidiarrhoeal effect from 1h post treatment. This antidiarrhoeal action was mediated via an inhibition in intestinal transit due to impairment of intestinal peristalsis, rather than to an increment in intestinal fluid absorption and/or reduction in secretion. The decoction may have a potential in symptomatic relief of non-specific acute diarrhoeas.

Key words: *Scoparia dulcis*, antidiarrhoeal activity, peristalsis, intestinal transit, traditional medicine

1. Introduction

In Sri Lanka, about 35% of the population is primarily dependent on Ayurvedic and traditional systems of health care, and there is a long history of traditional knowledge associated with plant use (Mahindapala, 2001). Diarrhoea is one of the commonest gastrointestinal disorders treated by traditional practitioners, especially in the rural areas. One Sri Lankan traditional practitioner claims that decoction made from *Scoparia dulcis* Linn (Family Scrophulariaceae, Sinhala: Wal Kottamalli) is therapeutically effective against acute and non-specific forms of diarrhoea. It is an erect perennial herb with a stem up to 60 cm high and with ternately whorled tapering leaves, which are sub acute at apex. The flowers are small, white in colour and arranged in inflorescences of 2-5 and carry white erect hairs at throat and a corolla tube with inserted filaments. In Sri Lanka, this plant is