

Oral Hypoglycaemic Activity of Three Ayurvedic Drug Formulations Marketed in Sri Lanka for Diabetes

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Abstract

Most Ayurvedic drug formulations marketed in Sri Lanka for the treatment of diabetes mellitus have not been scientifically evaluated and their therapeutic efficacy remains unknown. The effect of three such formulations, 'Madumeha Harani' syrup, 'Dilini Madumeha Suwaya' syrup, and 'B' Kapu' tablet, on the fasting blood glucose levels of rats, was investigated. The efficacy of these preparations was evaluated by comparing with a reference hypoglycaemic drug, tolbutamide. The serum glucose level of both 'control' and 'treated' rats was determined by the glucose hexokinase UV procedure, immediately prior to dose administration, and hourly intervals, for 4 h post administration. A significant ($P < 0.05$) reduction in the fasting blood glucose level of rats was observed in the first 3 h post administration for 'Madumeha Harani' and during the last 3 h, for 'Dilini Madumeha Suwaya'. 'Madumeha Harani' and 'Dilini Madumeha Suwaya' syrups exhibited 49.9% and 57.6% of oral hypoglycaemic activity of tolbutamide, respectively, and thus merit further investigation on their mode of action.

Keywords : diabetes, hypoglycaemic activity, Ayurveda, Madumeha, B-Kapu, tolbutamide, fasting blood glucose.

1. Introduction

Non Insulin Dependent Diabetes Mellitus (NIDDM) is a major public health problem on global scale effecting both the developed world and developing countries. It is expected that there would be about 65 million people affected with diabetes mellitus by the year 2000 (1). The prevalence of diabetes mellitus in the general population is greater than 6% (2) and it is claimed that there is a high prevalence (5.1%) of NIDDM in Sri Lanka too (3,4).