

Anxiolytic activity of Moralbosteroid, a steroidal glycoside isolated from *Morus alba*

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Abstract

Mulberry, *Morus alba* L., as a non-toxic natural therapeutic agent, belongs with the family of Moraceae and has been cultivated in many Asian countries such as China, India, Korea, Japan and Thailand where the leaves were used as food for silkworms, is a natural food additive having vitamins, carbohydrates, mineral, lipids, sugars, proteins, fibers, etc. in appropriate proportion. The study aimed to evaluate the anxiolytic activity of Moralbosteroid isolated from *Morus alba*. The anxiolytic study was carried out on elevated plus-maze, light and dark model and open field test. It significantly increased the percentage of time spent (control = 33.27 ± 0.59 sec) and number of entries in open arm (control = 6.39 ± 0.72) in elevated plus-maze apparatus. In light and dark model, moralbosteroid produced significant increase in time spent (control = 54.82 ± 1.04 sec), number of crossing (control = 21.53 ± 0.85) and decrease in the duration of immobility (control = 37.22 ± 1.37 sec) in light box. In open field test, moralbosteroid show significant increase in number of rearing (control = 10.42 ± 0.13), assisted rearing (control = 6.28 ± 0.18) and number of square crossed (control = 57.51 ± 2.19). It is concluded that Moralbosteroid have therapeutic potential for managing anxiety.

Keywords: *Morus alba*; Moralbosteroid; Elevated plus-maze; Light and dark model; Open field test; Anxiolytic

Introduction

Anxiety-related disorders such as generalized anxiety, panic, obsessive-compulsive disorder, phobias or post-traumatic stress are the most common mental illness and a major cause of disability in the world. Mental disorders have been found to be common, with over a third of people in most countries reporting them with sufficient criteria to be diagnosed at some point in their life (WHO, 2000). Although benzodiazepines are among the first line of anxiolytic drugs with well-known benefits, their side effects are prominent, including sedation, muscle relaxation, anterograde amnesia and physical dependence (Kaplan and Sadock,