

Analgesic activity of *Leea indica* (Burm. f.) Merr.

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Abstract

The analgesic potential of *Leea indica* (Burm. f.) Merr., a Bangladeshi tribal medicinal plant was studied for the first time. Despite the progress that has occurred in recent years in the development of therapy, there is still a need for effective and potent analgesics, especially for the treatment of chronic pain. One of the most important analgesic drugs employed in clinical practice today continues to be the alkaloid morphine. Analgesic potential of *L. indica* was evaluated for centrally acting analgesic property using formalin induced licking response model and peripheral pharmacological actions using acetic acid-induced writhing test. In acetic acid-induced writhing test, ethanolic extracts at 200 mg/kg dose exhibited significant ($p < 0.05$) reduction of writhing response in a dose dependent manner; in formalin induced licking response model a significant ($p < 0.05 - 0.001$) result was comparable to the standard drug diclofenac sodium. From the results it was concluded that both extracts exhibited anti-nociceptive activity by central and peripheral mechanism(s). Plant-derived substances have, and will certainly continue to have, a relevant place in the process of drug discovery, particularly in the development of new analgesic drugs.

Keywords Analgesic; Antinociceptive; *Leea indica* (Burm. f.) Merr.; writhing;

Introduction

Medicinal herbs have been used as a form of therapy for the relief of pain throughout history (Almeida *et al.*, 2001). The treatment of rheumatic disorder is an area in which the practitioners of traditional medicine enjoy patronage and success (Akah and Nwambie, 1994). Natural products in general and medicinal plants in particular, are believed to be an important source of new chemical substances with potential therapeutic efficacy. Taking into account the most important analgesic prototypes (e.g. salicylic acid and morphine) were originally derived from the plant sources, the study of plant species traditionally used as pain