



Antinociceptive, Anti-inflammatory and Anti-diarrheal Activities of the Hydroalcoholic Extract of *Lasia spinosa* Linn. (Araceae) Roots

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SUMMARY. Various parts of *Lasia spinosa* (Linn.) are widely used in many Asian countries to manage a wide range of diseases but so far no scientific study was done to find out its pharmacological properties which may support its uses in traditional medicine. The present study was carried out to evaluate the possible anti-nociceptive, anti-inflammatory, and anti-diarrheal activities of hydroalcoholic extract of root of *Lasia spinosa* in rodents. Anti-nociceptive activity was investigated using acetic acid-induced writhing and hot plate-induced pain in mice; anti-inflammatory activity using carrageenan-induced paw edema model rats and xylene-induced ear edema mice and anti-diarrheal activity using castor oil-induced diarrhea model mice. In acetic acid-induced writhing model mice, the extract caused a maximum of 50 % ($p < 0.001$) writhing inhibition at the dose of 500 mg kg⁻¹ body weight, which was comparable with standard drug, diclofenac sodium 60.71 % ($p < 0.001$) inhibition. The extract at the dose of 250 mg kg⁻¹ and at 500 mg kg⁻¹ also significantly increased pain threshold in hot-plate method in a dose dependent manner compared to the standard drug, nalbuphine. A dose dependent significant inhibitory effect on edema formation was found in xylene-induced ear edema model mice [17.0 5% at 250 mg kg⁻¹ ($p < 0.01$) and 27.9 % at 500 mg kg⁻¹ ($p < 0.01$)]. Inhibitory effect was also found in the carrageenan-induced paw edema model rat and it was highest after 3 h [26.72 % at 250 mg kg⁻¹ ($p < 0.01$) and 38.70% at 500 mg kg⁻¹ ($p < 0.001$)]. In case of castor oil-induced diarrhea mice model, both standard drug (loperamide) and extract significantly reduced the number of stools and enhanced the latent period of diarrhea induction dose dependently. These findings indicate that the extract has significant anti-nociceptive, anti-inflammatory, and also anti-diarrheal activity that supports its use in traditional medicine.

KEY WORDS: Diarrhea, Inflammation, *Lasia spinosa*, Nociception.

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