

عنوان مقاله:

Phytochemical, anti-inflammatory and analgesic properties of stembark extract and fractions of *Lonchocarpus sericeus* Poir. (Papilionaceae) in albino mice

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خلاصه مقاله:

Objective: *Lonchocarpus sericeus* stembark decoction has been extensively employed in folkloric medicine in many parts of Nigeria as a remedy for pain as well as inflammation. The plant was studied for its anti-inflammatory as well as analgesic potency using standard biological models. Materials and Methods: The stembark of *L. sericeus* was evaluated for anti-inflammatory properties using egg albumin and xylene-induced oedema models. The pain-relieving property was evaluated using acetic acid-induced writhing and thermally-induced pain models. Median lethal dose determination (intraperitoneal LD50), quantification of some phytochemicals as well as phytochemical screening were also performed. Results: The LD50 of stembark extract of *L. sericeus* was found to be 3,100 mg/kg (i. p). The crude extract and fractions (310-930 mg/kg) effectively reduced oedema caused by egg albumin and xylene and exhibited high analgesic properties in inhibiting pain induced by acetic acid and heat. These reductions were dose-dependent and statistically significant ($p < 0.05-0.001$) when compared to distilled water and similar to prototype drugs employed. Quantitative determinations of some bio-active constituents of the plant showed a higher flavonoid content (0.52 ± 0.02 mg/100 g) compared to alkaloids (0.36 ± 0.02 mg/100 g) and flavonoids (0.49 ± 0.03 mg/100 g). Phytochemical screening of the stembark showed the presence of alkaloids, cardiac glycosides, flavonoids terpenes, tannins and saponins. Conclusion: These results imply that the stembark extract of *L. sericeus* possesses anti-inflammatory and analgesic potency and these data validate its wide use in folkloric medicine for inflammation and pain management.

کلمات کلیدی:

Analgesia, Inflammation, *Lonchocarpus sericeus*, Phytochemicals

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