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Brine shrimp lethality and acute oral toxicity studies on Swietenia mahagoni (Linn.) Jacq. seed methanolic extract

Geethaa Sahgal, Surash Ramanathan, Sreenivasan Sasidharan, Mohd. Nizam Mordi, Sabariah Ismail, Sharif Mahsufi Mansor
aCenter for Drug Research and

ABSTRACT

Background The seeds of Swietenia mahagoni have been applied in folk medicine for the treatment of hypertension, diabetes, malaria, amoebiasis, cough, chest pain, and intestinal parasitism. Here we are the first to report on the toxicity of the Swietenia mahagoni crude methanolic (SMCM) seed extract. Methods SMCM seed extract has been studied for its brine shrimp lethality and acute oral toxicity, in mice. Results The brine shrimp lethality bioassay shows a moderate cytotoxicity at high concentration. The LC50 for the extract is 0.68 mg/ml at 24 hours of exposure. The LD50 of the SMCM seed extract for acute oral toxicity in mice is greater than 5000 mg/kg. Conclusion This study demonstrates that Swietenia mahagoni crude methanolic seed extract may contain bioactive compounds of potential therapeutic significance which are relatively safe from toxic effects, and can compromise the medicinal use of this plant in folk medicine.

KEYWORDS

Acute oral toxicity . brine Shrimp . Swietenia mahagoni seeds

REFERENCES