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Antiepileptic Effects of Ethanol Leaf Extract of *Azanza garckeana* (F.Hoffm.) Exell & Hillc. on Strychnine-Induced Seizures in Wistar Mice

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ABSTRACT

Introduction: *Azanza garckeana* (Goron Tula) is an edible Indigenous fruit found in the northeastern region of Nigeria, known for its medicinal properties in treating bacterial infections, diabetes, infertility, and menstrual pain, among others. Pharmacological studies have reported various effects of *A. garckeana*, including antibacterial, antifungal, antihyperglycemic, antimalarial, antioxidant, and improved iron absorption activities. This study aimed to investigate the phytoconstituents, assess acute toxicity (LD50), and evaluate the antiepileptic effects of the plant's leaf extract.
Methods: The dried leaves were extracted using ethanol through Soxhlet extraction method, followed by phytochemical screening. LD50 was assessed using the intraperitoneal (ip) method based on Lorke's protocol, and the antiepileptic effect was tested in strychnine-induced mice. The statistical analysis was conducted on the antiepileptic activity.
Results: Phytochemical analysis revealed the presence of flavonoids, cardiac glycosides, terpenoids, carbohydrates, tannins, cardenolides, and saponins. The intraperitoneal LD50 was determined to be 2154 mg/kg. The ethanol extract demonstrated antiepileptic activity, providing 40%, 60%, and 60% protection at extract doses of 100, 200, and 300 mg/kg body weight, respectively.
Conclusion: The leaves of *A. garckeana* can be considered relatively safe for medicinal use and contain phytoconstituents that exhibit antiepileptic effects. Further research employing various extraction techniques, pharmacological models, and the isolation and identification of bioactive compounds is recommended.

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