

Anti-Microbial Studies and the Effect of the Aqueous Extract of *Cyphostemma glaucophilla* Leaves on the Concentration of Total Plasma Proteins and Albumin in Corn-Meal Induced Kwashiorkor Rats

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Abstract:

Cyphostemma glaucophilla is used in the treatment of kwashiorkor in ethno-medicine in Kogi and Kwara States of Nigeria. The aqueous extract of pulverised dried leaves of *C. glaucophilla*, administered at various concentrations on some microorganism were evaluated in cultured plates of nutrient Agar. Three different antibiotics; ampiclox, lincomycin and chloramphenicol were used as synthetic drugs to evaluate their comparative efficacy with the extract. Five Groups A, B, C, D and E of rats weighing 100-110g of either sex were served with rat feed and water (control, A). Kwashiorkor was induced in Groups B, C, D and E by given protein deficient diet (corn meal) for 14 days. After 14 days, the malnourished Groups were served oral daily doses of 0.5, 1.0, 1.5 and 2.0 mg/kg b.w of the extract for 14 days respectively while Group A received (0.85g NaCl; 5ml/kg). The blood samples were obtained via ocular puncture into heparinised centrifuge tubes and spun at 1000rpm for five minutes to obtain the plasma on day 0 (start of treatment) and day 14 (end of treatment) for the determination of the concentration of total protein and albumin by standard methods. Data were analysed by oneway ANOVA and student independent t-test and presented as mean \pm standard deviation values of $p < 0.05$ were considered significant. *Cyphostemma glaucophilla* leaves extract exhibited anti-microbial properties comparable with the antibiotics and produced dose dependent significant ($p < 0.05$) increases in the concentration of plasma total proteins and albumin in kwashiorkor induced rats.

Keywords: *Cyphostemma glaucophilla*, Anti-microbial, Antibiotics, Kwashiorkor