

Safety and Efficacy study of a herbal concoction used for alternative/complementary treatment of HIV infection in Nigeria

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Background: It is not uncommon for patients to opt for orthodox remedies exclusively or concurrently with modern remedies for disease conditions like HIV-AIDS. This study was designed to evaluate the safety in experimental animals and efficacy in human of an herbal concoction, 'α-Zam' used by clients seeking herbal remedy for treatment of HIV infection in Nigeria.

Methods: Graded doses (400mg/kg, 800mg/kg, 1600mg/kg and 3200mg/kg) of α-Zam were administered to 4 test groups of Wistar albino rats for 84 days; the control received distilled water. On the 85th day paired blood samples were collected from all the rats for haematology and clinical chemical parameters. Preliminary medical and laboratory examinations using WHO criteria were done after confirmation of HIV infection by Western blotting in the nearest teaching hospitals to the residence of fifty-one patients (23 males, 28 females) taking α-Zam as complementary or alternative therapy. The patients were studied for 16 months to assess the adverse-effects, drug interactions, toxicity and effectiveness of the herbal remedy using blood microscopy, sputum AAFB, urine microscopy, haematology, clinical chemistry and viral (HIV-RNA) load by means of Polymerase Chain Reaction (PCR).

Results: In rats, this herbal remedy caused significant increase in globulins at 1600 mg/kg and 3200 mg/kg (61g/dl and 62 g/dl) compared with the control group (56 g/dl). About 7.8% of the patients had average increase in CD4 count of 262 ± 16 cell/ μ L, 45.1% patients with average increase of 310 ± 16 cell/ μ L, 31.4% patients with average increase of 456 ± 25 cell/ μ L and 15.7% patients with average increase of 510 ± 36 cell/ μ L post-treatment. There was very marked reduction in viral (HIV-RNA) load with 80.4% (41.3 % females, 39.1% males) and 19.6% (12.1 % females, 7.5 % males) HIV infected patients having undetectable viral load and < 1000 copies/ml respectively after the therapy. There was no evidence of adverse drug interaction in the patients using both the herbal and highly active anti-retroviral therapy (HAART).

Conclusion: The herbal concoction is an effective anti-HIV agent by causing increase in CD4 counts and decrease in viral load with no adverse drug interaction with HAART and could be studied further for periodic immunologic and virologic post-therapy.