

Effect of Yeast Selenium on CD4 T Cell and WAZ of HIV1 Positive Children in Nyamasaria in Kisumu Kenya

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Abstract : Background: Multi drug resistance HIV has emerged rendering the current conventional treatment of HIV ineffective. There is a need for new treatment regime which is cheap, effective and not prone to resistance development by HIV. Methods: In randomized clinical study of 68 HIV positive children 3 - 15 years to assess the efficacy of yeast selenium in HIV/AIDS patients, 50 μ yeast selenium was administered to 34 children while in matched control of 34 were put on placebo. Blood samples and weight of the both groups which were taken every 3 months intervals up to 6 months, were analyzed by ELIZA for CD4T cells, the data was analyzed by SPSS version 16, WAZ scores were analyzed by Epi Info version 6. Results: No significant difference in age { χ^2 (1, 62) = 0.03, p = 0.853}, cause of morbidity between test and controls { χ^2 (1, 65) = 5.87, p = 0.015} and on condition of foster parents { χ^2 (1, 63) = 5.57, p = 0.0172} was observed. Children on selenium showed progressive improvement of WAZ and significant difference at six months {F (5,12) = 5.758, P=0.006}, and weight gain of up to 4.1 kilograms in six months, and significant CD4 T cell count increase t = -2.943, p < 0.05 compared to matched controls t = -1.258 p > 0.05. CD4 T cell count increased among all age groups on test 3-5 years (+ 267.1), 5-8 years (+200.3) 9-15 years (+71.2) cells/mm³ and in matched controls a decrease 3-5 years (-71), 5-8 years (-125) and 9-13 years (-10.1) cells/mm³. No significant difference in CD4 T cell count between boys {F (2, 32) = 1.531 p = 0.232} and between boys {F (2, 49) = 1.040, p = 0.361} on test and between boys and girls {F (5, 81) = 1.379, p = 0.241} on test. Similarly no significant difference between boys and girls were observed {F (5, 86) = 1.168, p = 0.332}. In the test group there was significant positive correlation β = 252.23 between weight for age (WAZ), and CD4 T Cell Count p = 0.007, R² = 0.252, F < 0.05. In matched controls no significant correlation between weight gain and CD4 T cell count change was observed at six months p > 0.05. No positive correlation β = -138.23 was observed between CD4T Cell count, WAZ, p = 0.934, R² = 0.0337 F > 0.05. Majority (96.78%) of children on test either remained or progressed to WHO immunological stage I. Conclusion: From this study it can be concluded that yeast Selenium is effective in slowing the progress of HIV 1 in children from WHO clinical stage I by improving CD4 T cell count and hence the immunity.

Keywords : selenium, HIV, AIDS, WAZ

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