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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 asses the efficacy of yeast selenium in HIV/AIDS patients, 50µ 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 { $\chi 2$ (1, 62) =0.03, p =0.853}, cause of morbidity between test and controls {$\chi 2$ (1, 65) = 5.87, p= 0.015} and on condition of foster parents {$\chi 2$ (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 inCD4 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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