EVALUATION OF A PRACTICAL METHOD TO ASSESS ANTIRETROVIRAL ADHERENCE IN HIV-INFECTED THAI CHILDREN

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Abstract. The objective of this study was to evaluate a practical method to assess adherence to antiretroviral therapy by observing virological and immunological responses. We conducted a 12-month longitudinal cohort study of 162 HIV-infected Thai children. Adherence was assessed using 5 methods (self reporting calendar, records of missed doses, pill counts, physician assessment, and an interview questionnaire). CD_4 count, percentage and viral load were performed at baseline and at 12 months. Mean adherence rates at 2, 6, and 12 months were 98, 100, and 99% by the calendar method; 98, 100, and 100% by recording missed doses; 96, 96, and 92% by pill count; and 90, 94, and 97% by physician assessment. Poor agreement (kappa ≤ 0.1) was found among the methods. There was a statistically significant difference ($p = 0.05$) in virological response between participants with ≥ 95% adherence (0.8 $\log_{10}$) and those with < 95% adherence (0.2 $\log_{10}$) when pill counts were used to assess adherence. In conclusion, despite poor agreement among these tools, a pill count appeared to be the only practical, validated method to differentiate the virological outcome between those who were fully and partially adhere to the treatment regimen.

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