ABSTRACT

BACKGROUND:

Pill counts are often used to measure adherence to ART, but there is little data on how they affect adherence. We previously showed a bivariate relationship between clinicians counting pills and adherence in patients receiving HIV care in Kenya. We present a secondary analysis of the relationship between numbers of pill counts and clinical outcomes in resource limited settings.

METHODS:

Patients initiating ART at Kijabe Hospital were monitored for the number of discretionary pill counts performed by their clinician in the first 6 months of ART. Subjects were followed for at least 1 year after enrollment. The number of clinician pill counts was correlated to ART adherence. The primary endpoints were time to treatment failure, defined as a detectable HIV-1 viral load, death; or loss to follow-up.

RESULTS:

Clinician pill counts were done at 68% of clinic visits for 304 subjects. There was a positive correlation between the number of clinician pill counts and ART adherence ($r = 0.21$, $p < 0.001$). Patients were divided into 3 groups (0 counts, 1 to 3 counts, 4 to 7 counts) and exhibited adherence of 76%, 84%, and 92%, respectively ($p = 0.004$). Time to treatment failure for these groups was 220 days, 438 days, and 497 days ($P<0.01$), respectively. Time to virologic failure in living patients remaining in the cohort was longer in those with more pill count ($P =0.02$). Multivariate analysis adjusting for co-variates affecting time to treatment failure found that that clinician pill counts were associated with a decreased risk of treatment failure ($HR = 0.69$, $p =0.04$).

CONCLUSIONS:

The number of clinician pill count performed was independently associated with better adherence and a decreased risk of treatment failure. The use of clinician pill counts should be further studied as an adherence promoter through a randomized clinical trial.