

### Predictors of good adherence to aciclovir in a randomised controlled trial of HSV-2 suppressive therapy in Tanzania

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**Background:** Recent trials in Africa have shown an impact of Herpes simplex virus (HSV) suppressive therapy on HIV-1 plasma and genital viral load over a 3-month period. A trial in Tanzania examining the effect of aciclovir on HIV incidence and HIV plasma and genital viral load with longer follow-up found no evidence of an effect, possibly due to sub-optimal adherence. Factors associated with adherence in this trial are described.

**Methods:** Overall 1305 Tanzanian HSV-2 seropositive women aged 16-35 years were randomised to aciclovir 400 mg BD or placebo and followed 3 monthly for 12-30 months. Adherence was assessed by tablet counts. A random sample of urine aliquots collected between 6-24 months were tested for aciclovir by HPLC. Repeated-measures logistic regression identified predictors of good adherence (taking  $\geq 90\%$  of tablets). Analysis was restricted to the period when women were on treatment and excluded any visits after withdrawal from tablets.

**Results:** At 12, 24 and 30 month visits, 56%, 52% and 54% of women on treatment had adherence  $\geq 90\%$ , respectively. Factors independently associated with good adherence included older age, higher educational level, number of children, living 2 years in the enrolment site, using oral contraception at screening, living in the same house as the previous visit (adjusted OR=1.44, 95%CI 1.22-1.69), and recent malaria (adjusted OR=1.14, 95%CI 1.01-1.29). There was no significant difference in adherence by trial arm. A positive pregnancy test was inversely associated with good adherence (adjusted OR=0.61, 95%CI 0.47-0.79). Overall, 45% of urine samples tested from women randomised to aciclovir did not have detectable aciclovir.

**Conclusions:** Younger, less well-educated women, more mobile women and those who had not used oral contraception recently, which may sensitise them to daily tablet taking, need further measures to ensure adequate compliance with oral therapies.

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