

Abstract

BACKGROUND::

We conducted a prospective cohort study of HIV-positive men ages 18-35 years in Kisumu, Kenya to determine if medical circumcision of ART-naïve HIV-positive men leads to increased viral load and penile viral shedding.

METHODS::

From 108 HIV-positive men circumcised by forceps guided method and followed-up weekly for six weeks, 29 were evaluated for penile viral shedding. HIV-1 RNA was measured in plasma from 19 men and in penile lavage samples from 29 men. Samples were collected before circumcision and at weekly intervals for six weeks or until the circumcision wound was healed. CD4+ t-cell counts from 102 HIV-positive men were determined at baseline and at 2 weeks thereafter. Wounds with healthy scar, no scab or opening and no suture tracks were deemed healed.

RESULTS::

Among 65 ART-naive men, mean CD4+t-cell count increased from 417 cells/mm at baseline to 456 cells/ mm after 2 weeks ($p= 0.04$), but did not change in the 37 men on ART ($p=0.81$). There was no change in HIV plasma viral load ($p=0.36$), but penile viral shedding rose significantly within one week after circumcision then declined to undetectable levels by 6 weeks (MANOVA; $p<0.001$). In 28 of 29 men (96.6%), there was no detectable viral shedding after certification of wound healing.

CONCLUSION::

Medical circumcision among ART-naïve HIV-infected men results in a transitory rise in penile viral shedding before complete wound healing, which should pose no additional risk of HIV transmission if men adhere to six weeks post-circumcision sexual abstinence and use condoms consistently.