Persistently HIV-1 seronegative Nairobi sex workers are susceptible to in vitro infection

Abstract

OBJECTIVE:

To evaluate whether resistance to HIV-1 infection in a subset of highly exposed sex workers correlates with resistance at the cellular level.

DESIGN:

In vitro evaluation of susceptibility to infection by Kenyan HIV-1 isolates and cellular production of potential mediators of resistance.

SETTING:

Samples were collected in a primary care clinic in Nairobi.

PATIENTS:

Thirteen individuals from a cohort of sex workers with a similar risk of acquiring HIV infection and six unexposed controls.

INTERVENTIONS:

Subjects were provided with appropriate primary care and counselling on the prevention of sexually transmitted diseases.

RESULTS:

No inherent cellular resistance to infection was identified. CD8⁺ cells from a subset of subjects strongly inhibited viral replication.

CONCLUSIONS:

Lack of infection in this cohort was not attributable to factors inherent to CD4⁺ cells. Resistance to HIV infection is likely to be multifactorial, and products of CD8⁺ cells and unique features of mucosal sites probably contribute to this state.