Retrovirology

BioMed Central

Poster presentation

P11-17. Intermittent rectal shedding of multiple human adenovirus serotypes among HIV-positive MSM

M Curlin*[1], C Celum[2], J Sanchez[3], S Selke[2], J Baeten[2], M Huang[2], R Zuckerman[4], X Lu[5], D Erdman[5] and L Corey[1]

Address: [1]Vaccine and Infectious Diseases Institute, Fred Hutchinson Cancer Research Center, Seattle, WA, USA, [2]University of Washington School of Medicine, Seattle, WA, USA, [3]Asociación Civil Impacta Salud y Educación, Lima, Peru, [4]Dartmouth-Hitchcock Medical Center, Lebanon, USA and [5]Centers for Disease Control and Prevention, Atlanta, GA, USA

* Corresponding author

from AIDS Vaccine 2009
Paris, France. 19–22 October 2009

Published: 22 October 2009

Retrovirology 2009, **6**(Suppl 3):P162 doi:10.1186/1742-4690-6-S3-P162

This abstract is available from: http://www.retrovirology.com/content/6/S3/P162

Background

The association between prior seropositivity to human adenovirus (HAd) type 5 and increased HIV acquisition in the Step Vaccine Study has raised questions concerning the frequency of endemic HAd infection in adults. Few studies have documented the frequency and types of HAd infections in HIV-infected populations using sensitive molecular methods. In this study we retrospectively tested rectal swabs collected from a prospective cohort of Peruvian HIV-positive MSM for the presence of HAds.

Methods

Swabs were collected from 20 individuals (median CD4+ T cells 406/μl, median plasma HIV viral load 4.3 log10 cop/ml) three times/week for 18 weeks. Viral DNA was eluted from the swabs in 1 ml proteinase K, and amplified using a sensitive multiplex PCR assay that detects all currently recognized HAd serotypes. Molecular typing of identified viruses was performed on a subset of samples by partial-length hexon gene sequencing.

Results

Fifteen of the twenty individuals (75%) shed HAd intermittently. CD4 count and plasma HIV-1 viral load did not differ between participants with and without HAd shedding (Mann-Whitney, p = 0.349 and p = 0.497, resp.). Among shedders, HAd was detected in 30% of samples (range 2.0% to 64.7%) with a mean of 6.1×10^3 adenovirus copies/ml of eluate (range $1.51 \times 10^2 - 2.2 \times 10^8$ copies/ml). HAd shedding typically occurred on consecutive days in distinctly clustered episodes lasting a median of 4 days (range 1 to 9 days) separated by periods without shedding. At least 21 HAd types from species B, C, and D were identified, including Ad5, Ad26 and Ad48. Eight of fifteen shedders (53%) had more than one serotype present.

Conclusion

In conclusion, we found a high prevalence of rectal shedding of diverse human adenoviruses among HIV-positive MSM, including serotypes presently under consideration as vaccine vectors.