HIV Can Infect Entire Female Reproductive Tract

October 14, 2014

HIV can apparently infect cells throughout the entire female reproductive tract (FRT), according to primate research. Publishing their findings in PLOS Pathogens, researchers studied how a proxy for the simian immunodeficiency virus infected the FRTs of eight rhesus macaques. (SIV is HIV's simian cousin.)

The scientists created an artificial virus, also known as a vector, that infects cells by the same method as SIV, but which does not spread to other cells, allowing the researchers to identify the directly infected cells. Aiding them in this process were two "reporter genes" delivered by the vector, one of which provided genetic information for an enzyme from fireflies that gives rise to the glowing substance luciferin, and a second that delivered genes for a red fluorescent protein known as mCherry. After vaginally exposing the macaques to the vector, the researchers were able to scan tissue in the FRTs of the animals with high-resolution microscopy in order to detect infected cells.

Forty-eight hours after delivering the vector, the researchers analyzed the FRT tissues and found that cells, primarily CD4s, had been infected throughout the FRT, including the vagina, cervix, ovaries and area lymph nodes. Most of the monkeys were infected at more than one site, most commonly the vagina and outer cervix, and to a lesser extent the ovary. The vector infected the inner cervix of one macaque and the lymph nodes of one other..

Because the study was so small and the animals were at varying phases of their menstrual cycles, it is not possible to determine from this study what the risk of infection may be for each site.

To read the study, click here.

To read a press release about the study, click here.

© 2026 Smart + Strong All Rights Reserved.

http://beta.docker.poz.com/article/FRT-infection-26295-6410