Early Trial Raises Hopes of Quarterly PrEP Injections

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An injectable long-acting antiretroviral succeeded in preventing rectal acquisition of SIV, the simian cousin of HIV, among monkeys, opening the door for a possible form of pre-exposure prophylaxis (PrEP) that requires only quarterly injections, The New York Times reports. Researchers published their findings in Science and also presented them at the Conference on Retroviruses and Opportunistic Infections (CROI) in Boston.

The scientists injected eight rhesus macaque monkeys with the long-acting integrase inhibitor GSK1265744 (GSK744 LA) at two points separated by four weeks. A week after the first injection, these monkeys, as well as eight untreated others who served as a control, received eight weekly rectal exposures to SIV. The control animals acquired SIV after an average of two exposures, while none of the treated monkeys were infected.

The results offer promising news for the future of PrEP, considering that trials of Truvada (tenofovir/emtricitabine) have shown that most people taking the daily pill to prevent HIV acquisition adhere poorly to the drug regimen and as a consequence the drug is less effective. A periodic injection could help to solve the adherence problem.

“We are encouraged by the results of these animal studies,” Martin Markowitz, a co-investigator on this study and the clinical director at the Aaron Diamond AIDS Research Center and Aaron Diamond Professor at the Rockefeller University, said in a release. “Perhaps most exciting is that the levels of drug that were fully protective in this animal model are readily achievable in man with quarterly injections of GSK744 LA and these data form the rationale for taking the agent into initial clinical studies.”

A Phase II trial of GSK744 LA, in which the drug will be given to men at low risk for HIV, will begin in the next few months. This will lay the groundwork for a Phase III study of high-risk individuals that will ultimately determine the drug’s efficacy as a means of HIV prevention.

To read the New York Times story, click here.

[Note, the Times erroneously states that in previous studies of daily oral PrEP “the only participants protected were those who took their pills every day without fail.” In fact, those who adhered perfectly to the medication regimen were the only ones who were totally protected. Those

who did not adhere perfectly to the PrEP regimen in these trials were still less likely to acquire HIV than those who did not take PrEP at all, but the regimen did not eliminate their risk entirely. The Times also incorrectly states that the injections prevented AIDS in monkeys, rather than SIV. In order for an HIV therapy to prevent AIDS, the monkeys would have to be infected with the virus that causes AIDS. On the contrary, this study concerned preventing transmission in the first place.]

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