Long-Acting PrEP Injection Prevents Anal Simian HIV Transmission

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A long-acting, injectable version of the antiretroviral dolutegravir prevented rectal transmission of simian HIV (SHIV) in eight macaques, the National AIDS Treatment Advocacy Project reports. Presenting their findings at the 20th Conference on Retroviruses and Opportunistic Infections (CROI) in Atlanta, investigators working in collaboration with GlaxoSmithKline (GSK) tested the nanoparticle-encased GSK1265744LAP (GSK744), which is a dolutegravir analog that has such a long half-life that monthly or even quarterly dosing is possible.

Eight macaques were given two injections of GSK744 as pre-exposure prophylaxis (PrEP), the first a week before exposure to SHIV and the second four weeks later. Another eight control macaques did not receive the injections. Then all of the primates were exposed rectally to SHIV each week for up to eight weeks.

All the macaques in the control group were infected with SHIV after a median two exposures, with a range of one to seven weeks. None of those who received the PrEP injections showed signs of infection during the eight weeks of exposures or for three weeks following. The investigators plan to continue monitoring all the macaques for at least 10 weeks after the last SHIV exposure.

All of the primates tolerated the drug well. The investigators concluded that GSK744 appears to be a promising avenue for PrEP among humans with either monthly or quarterly dosing. Considering that a major study of PrEP in African women recently failed because of adherence challenges, an agent requiring such infrequent dosing may be more in line with the needs of such a population and thus answer the problems that plagued that research.

To read the NATAP report, click here.

To read the conference abstract, click here.

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