PrEP Use Tied to Some Drug Resistance in Those Who Contract HIV

In a recent small study, resistance was limited to the emtricitabine component of Truvada and did not seem a major cause for concern.

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In some cases, people who take pre-exposure prophylaxis (PrEP) but nevertheless contract HIV see their virus develop resistance to antiretrovirals (ARVs), yet the resistance tends not to be a major cause for concern, aidsmap reports. At least that was the finding among a small cohort of former PrEP users in London.

The Dean Street Collaborative Group of researchers reviewed the medical records for all people attending the 56 Dean Street clinic in London who tested positive for HIV between July 2015 and January 2019. They identified 22 people who mentioned having taken PrEP during the year prior to their diagnosis and compared them with 917 people diagnosed with the virus who did not take PrEP.

The study authors published their findings in a letter in The Lancet.

All those who took PrEP were gay men. The average age was 32 years old.

Those who had taken PrEP had an average viral load of just 7,700, compared with 58,000 among those who had not taken PrEP.

The investigators performed genetic analyses of everyone's HIV, looking for two specific drug resistance mutations. The first was M184V, which tends to be quite common and yet is not considered very serious; it confers resistance to emtricitabine and lamivudine. The former drug is included in Truvada (tenofovir disoproxil fumarate/emtricitabine) and Descovy (tenofovir alafenamide/emtricitabine), the two forms of PrEP that are approved in the United States.

The second mutation is K65R, which confers resistance to tenofovir, also included in Truvada and Descovy, abacavir and, to a lesser extent, other drugs in the nucleoside/nucleotide reverse transcriptase inhibitor class. K65R is rare and can considerably compromise the ability to construct an effective ARV regimen.

None of the 22 PrEP users had the K65R mutation, and five (23%) had the M184V mutation. Five

(1%) of the non–PrEP users also had the M184V mutation.

Twenty of the PrEP users started ARVs, doing so a median of 10 days after their diagnosis. Three months later, 17 of them were still receiving medical care at 56 Dean Street; all but one had a fully suppressed viral load. Four of those with an undetectable viral load had the M184V mutation, and all received emtricitabine in their ARV regimen. The fifth person with that mutation stopped receiving care at the clinic.

To read the aidsmap article, click here.

To read the study abstract, click here.
