HIV Treatment Efficacy Has Steadily Improved

Researchers conducted a systematic review of antiretroviral treatment outcomes since 1994 among 78,000 people with HIV.

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The success rates of antiretroviral (ARV) treatment have steadily improved since effective combination HIV therapy first entered advanced clinical trials in the mid-1990s, aidsmap reports.

Publishing their findings in the journal AIDS, researchers conducted a systematic review of ARV treatment outcomes among 77,999 people with HIV who participated in 181 studies between 1994 and 2017.

A total of 44.2 percent of the participants took Truvada (tenofovir disoproxil fumarate, or TDF/emtricitabine) or Descovy (emtricitabine/tenofovir alafenamide, or TAF) as an ARV treatment backbone. An additional 28 percent took a thymine-based backbone and 10 percent took an Epzicom (abacavir/lamivudine) backbone. The most common third ARV medications in the regimens were non-nucleoside reverse transcriptase inhibitors (50 percent), boosted protease inhibitors (28 percent) and integrase inhibitors (12 percent).

The analysis defined treatment efficacy as having an undetectable viral load at weeks 48, 96 and 114 of treatment; switching to a different ARV regimen for any reason was considered treatment failure.

Virtually all the studies reported week 48 efficacy, which was 71 percent overall. Average efficacy was 57 percent in studies beginning between 1994 and 2000, 69 percent for those beginning between 2001 and 2005, 77 percent for those beginning between 2006 and 2010 and 84 percent for those between 2011 and 2015.

The comparable respective average efficacy rates at week 96 (41 percent of studies reported data) during these time periods were 52 percent, 61 percent, 65 percent and 80 percent, for an overall efficacy of 64 percent. The comparable respective figures at week 144 (14 percent of studies reported data) were 45 percent, 55 percent, 72 percent and 77 percent, for an overall efficacy of 62 percent.

Taking Descovy or Truvada, as opposed to other ARV backbones, was independently associated

with a higher efficacy rate at weeks 48, 96 and 144. Other independent predictors of efficacy at week 48 included receiving drug resistance testing before starting treatment, having a higher initial CD4 count and taking a once-daily ARV regimen as opposed to a multidose regimen.

Phase IV efficacy rates were lower than those of Phase III trials, meaning that the advanced trials that lead to the approval of ARVs offered inflated results compared with trials conducted after the approval of those drugs.

To read the aidsmap article, click here.

To read the study abstract, click here.

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