HIV Actually Appears to Have Strengthened, at Least in Europe

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HIV's virulence seems to have gathered steam over time, according to a large study of the epidemic in Europe, aidsmap reports. This finding is in direct contrast to a small study conducted in sub-Saharan Africa that made headlines on World AIDS Day. Publishing their findings in The Lancet, researchers in the pan-European CASCADE study of 15,875 people with HIV examined key viral and immune system markers between 1979 and 2008 to analyze how the virus has adapted and changed throughout the population.

The researchers found that the average time individuals took to see their CD4 levels fall below 350 after contracting HIV has fallen from 7 years for those who seroconverted in 1980 to 3.4 years for those who did so in 2002. The estimated CD4 count following seroconversion was 770 in 1979 and 570 in 2002, indicating that HIV's acute phase appears to have become more destructive to the immune system. The average viral load set point—the level at which the virus replicates following the acute phase spike—rose from 11,200 in 1980 to 31,000 in 2002. It appears there was a decline to 25,500 in 2008, however.

These findings suggest there is greater urgency to "test and treat" people for HIV, as the slogan goes, since people who contract the virus have a smaller amount of time before HIV disease progresses significantly. Treating the virus as early as possible would also yield significant benefits for prevention of the virus, since the higher viral set point means that untreated HIV is 44 percent more infectious on average.

While the African trial may be flawed because the study was so small and compared only two time points, it is also possible that both studies' findings are valid. Because antiretroviral (ARV) treatment was introduced in sub-Saharan Africa more recently, African HIV may have evolved to favor less virulent strains that did not kill "hosts" before they could pass on the virus. In Europe, ARVs may have shaped the evolution of the virus such that strains that replicate more rapidly in the absence of treatment are more likely to get passed on, since once people go on treatment the chance of transmission plummets.

To read the aidsmap story, click here.

To read The Lancet abstract, click here.

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