

Studies suggest HIV subtype more deadly than others

November 27 2007

Two studies led by researchers at the Johns Hopkins Bloomberg School of Public Health found that people infected with HIV in Thailand die from the disease significantly sooner than those with HIV living in other parts of the world. According to the researchers, the shorter survival time measured in the studies suggests that HIV subtype E, which is the most common HIV subtype in Thailand, may be more virulent than other subtypes of the virus. Both studies are published in a special issue of the journal *AIDS*.

The first study followed 228 men over a 14-year period starting in 1991. All of the men were serving in the Thai military and were HIV-negative when they enrolled in the study. The researchers tested for HIV every six months to determine approximately when they acquired HIV. The men were also diagnosed at a time before combination antiretroviral drug therapy was available.

The researchers compared the group of Thai men to a group of similar HIV-positive men living in North America and Europe who were included in another study. The median time from HIV infection to death for the Thai men was 7.8 years compared to 11 years for HIV-positive men living in North America and Europe. The survival rate for the Thai men was also lower than studies of similar populations living in low- and middle-income countries in sub-Saharan Africa where subtypes A, C, D and G circulate. However, the shorter survival after HIV infection among persons in Africa infected with subtype D was similar to the survival among the Thai men.

“We were surprised to learn that the young military recruits from Thailand appeared to develop AIDS more quickly and have shorter survival after their HIV infection than persons in Africa who were carefully followed,” said lead author Ram Rangsinsin, assistant professor of Community and Military Medicine at Phramongkutklao College of Medicine in Bangkok. Rangsinsin conducted the research while studying at the Bloomberg School of Public Health. “Fortunately, the men who have survived after their infection are now receiving treatment with effective antiviral drugs and doing very well.”

For the second study, researchers followed a small group of male blood donors and their wives from 1992 to 2007. All of the men and women were determined to have acquired HIV fewer than two years prior to enrolling in the study. The median survival rate from infection to death was 7.8 years for the men and 9.6 years for the women. Again, the survival rate was lower than the 11 years reported for HIV-positive men in developed countries.

“The fact that both young military conscripts and blood donors and their wives in Thailand had similarly shortened survival compared to persons in the U.S. and Africa—except those infected with subtype D viruses—suggests that viral subtypes D and E may be more virulent than many other viral subtypes,” said Kenrad E. Nelson, MD, a senior author of both studies and professor in the departments of Epidemiology and International Health at the Bloomberg School. “If we could understand better the virulence characteristics of these viruses, we might learn something more about why those with HIV infection progress to AIDS, usually many years after they are infected.”

“The natural history of HIV-1 subtype E infection in young men in Thailand with up to 14 years of follow-up” was written by Ram Rangsinsin, Phunlerd Piyaraj, Thira Sirisanthana, Narongrid Sirisopana, Onsri Short and Kenrad E. Nelson.

Source: Johns Hopkins University

Citation: Studies suggest HIV subtype more deadly than others (2007, November 27) retrieved 10 April 2024 from <https://medicalxpress.com/news/2007-11-hiv-subtype-deadly.html>

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