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Young MSM changed HIV-1 epidemic pattern in Northeast China

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Abstract:

Background:

Human immunodeficiency virus type 1 (HIV-1) epidemic in China is featured by geographical diversity of epidemic patterns. Understanding the characteristics of regional HIV epidemic allows carrying out targeted prevention and control measures. However, in some regions of Northeast China, current HIV-1 epidemic feature is largely unknown.

Methods:

Information of 1006 newly diagnosed HIV-1 infected participants were collected before antiretroviral therapy during 2010-2016 in Heilongjiang province of Northeast China. HIV-1 genotype was identified based on the viral gag and env gene sequences. Recent infection was determined by Limiting-Antigen Avidity assays and the coreceptor usage of HIV-1 strains was predicted by Geno2Pheno software. Comparison analyses were made among different participant groups and sampling time periods to understand HIV-1 epidemic situation in this region.

Results:

Homosexual contact among men who have sex with men (MSM) was the main transmission route and CRF01_AE was the most dominant HIV-1 genotype. Newly diagnosed cases showed a younger trend, which was mainly due to the continuous increase in young cases (aged < 30 years) among MSM population, especially the young MSM infected by CRF01_AE virus. CRF01_AE had surpassed subtype B and become the dominant HIV-1 genotype among young MSM cases. The young MSM infected by CRF01_AE exhibited higher CD4 cell counts and a higher recent infection rate, and contained viruses with lower frequency of predicted CXCR4/CRR5CXCR4 usage. The MSM participants who were recently infected by CRF01_AE virus had a lower CD4 cell count than those by non_CRF01_AE virus.

Conclusions:

Young MSM have become a new vulnerable group for HIV-1 transmission in Northeast China. This group is changing local HIV-1 epidemic pattern. Measures for preventing and controlling HIV-1 infection among this population are urgently needed in the future.

Biography:

Fuxiang Wang has completed his PhD at the age of 32 years from The Fourth Military Medical University. He is the director of Department of Infectious Diseases, Shenzhen Third People's Hospital, Shenzhen, China. He has published more than 90 papers in journals.

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