Author's response to reviews

Title: Prospective cohort study of HIV incidence and molecular characteristics of HIV among men who have sex with men (MSM) in Yunnan Province, China

Authors:

Xu Jun-jie (xjjbeijing@gmail.com)
An Ming-hui (michelamh@hotmail.com)
Han Xiao-xu (xxhan@yeah.net)
Jia Man-hong (Jmanhong@yahoo.com.cn)
Ma Yan-ling (mayanling68@yahoo.com.cn)
Zhang Min (minzhang_100@hotmail.com)
Hu Qing-hai (qinghaihucn@gmail.com)
Chu Zhen-xing (laochu323@gmail.com)
Zhang Jing (zhangjing1985zj@hotmail.com)
Jiang Yong-jun (jiang_yongjun_jc@hotmail.com)
Geng Wen-qing (windygeng@163.com)
Lu Lin (yncdckjk@163.com)
Shang Hong (hongshang100@hotmail.com)

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Author's response to reviews: see over
Dear editor:

Enclosed is a copy of the manuscript titled "Prospective cohort study of HIV incidence and molecular characteristics of HIV among men who have sex with men (MSM) in Yunnan Province, China". It is submitted to be considered for publication as a "Original Article" in BMC infectious diseases. We believe the manuscript may be of particular interest to the readers.

This study reports the HIV incidence rate and HIV new infection related factors among a prospective MSM cohort in Yunnan Province, China where venous injection drug use was the traditionally dominant HIV transmission route. Yunnan province has the largest number of reported HIV/AIDS cases among all Chinese provinces. HIV transmission via homosexual behavior has been brought to attention only recently, the prevalence of HIV among Kunming MSM reached 10.82% during 2007-2008. However there is yet no published report on HIV incidence and its correlated factors among Yunnan MSM. And molecular characteristics of seoconverted Yunnan MSM were also not known. The study described in this manuscript aims to fill this knowledge gap.

A cohort of HIV-negative 378 Yunnan MSM was recruited and followed up during 2009-2011 to monitor HIV seroconversion and acute HIV infection rate using both standard HIV enzyme immunoassay (EIA) and HIV nucleic acid amplification testing (NAAT). We found a moderately high HIV incidence rate (3.5 cases/100 PY) within the cohort. Multivariate analysis showed that syphilis infection, occupation, bleeding experience after receptive anal intercourse, and ethnic groups were independent risk factors for HIV seroconversion, while other investigated sexually transmitted diseases (STDs) were not significantly associated with HIV seroconversion. Among the 7/10 amplified near full-length sequences, 71.4% (5/7) were CRF01_AE, and 28.6% (2/7) were CRF07_BC. Two pairs of HIV transmission pair detected among seroconverted minority ethnic MSM. One of the seven sequences had resistance to RTIs.

The study results support the proposal of a strengthened syphilis screening program among Yunnan MSM. Extra attention should be paid to certain subpopulations, such as male students and retired old MSM, in HIV epidemic surveillance. Appropriate behavior interventions tailored to MSM belonging to minority ethnic groups need to be implemented to prevent rapid HIV spread within this community. And continuing monitoring will be helpful to track cross-group transmission among various risk populations, for example, from local IDUs to MSM.

Neither the entire paper nor any part of its content has been submitted elsewhere. All of the listed authors have offered the consent to the submission. Thanks very much for your attention to our manuscript.

Sincerely yours,

Jun-Jie Xu
Correspondence author: Hong Shang
Key Laboratory of Immunology of AIDS, Ministry of Health, the 1st Affiliated Hospital of China Medical University, Shenyang 110001, Liaoning province, China
Tel: +86-24-83282634;
Fax: +86-24-83282634
E-mail: hongshang100@hotmail.com.