



ORIGINAL ARTICLE

Associated factors with syphilis among human immunodeficiency virus-infected men who have sex with men in Taiwan in the era of combination antiretroviral therapy



Yi-Hsin Chang^a, Wen-Chun Liu^b, Sui-Yuan Chang^{c,d},
Bing-Ru Wu^d, Pei-Ying Wu^e, Mao-Song Tsai^b,
Chien-Ching Hung^{b,f,g,*}, Chih-Yin Lew-Ting^h

^a Department of Nursing, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

^b Department of Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

^c Department of Laboratory Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

^d Department of Clinical Laboratory Sciences and Medical Biotechnology, National Taiwan University College of Medicine, Taipei, Taiwan

^e Center for Infection Control, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

^f Department of Medical Research, China Medical University Hospital, Taichung, Taiwan

^g China Medical University, Taichung, Taiwan

^h Institute of Health Policy and Management, National Taiwan University, Taipei, Taiwan

Received 3 April 2013; received in revised form 4 September 2013; accepted 4 November 2013
Available online 31 December 2013

KEYWORDS

Recreational drug;
Risky sexual behavior;
Serosorting;
Sexually transmitted
infection

Background/Purpose: Little is known about the factors associated with syphilis among human immunodeficiency virus (HIV)-infected men who have sex with men (MSM) with access to combination antiretroviral therapy (cART) in Taiwan, where MSM has re-emerged as the leading risk group for HIV transmission.

Methods: From March to October 2011, MSM who regularly attended HIV clinics at a university hospital were invited to participate in the study. A structured questionnaire interview was

* Corresponding author. Department of Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, 7, Chung-Shan South Road, Taipei 100, Taiwan.
E-mail address: hcc0401@ntu.edu.tw (C.-C. Hung).

conducted to collect information on sociodemographic characteristics, immunologic and virologic status, sexual partners and patterns of sexual behavior, and use of recreational drugs. **Results:** During the study period, 310 HIV-infected MSM with a mean age of 35.5 years were enrolled, of which 82.3% ($n = 255$) were sexually active and 37.4% ($n = 116$) used recreational drugs in the past 6 months. Syphilis was self-reported in 46.5% ($n = 144$) of the participants after HIV infection was diagnosed and 37.5% (112/299) had serologic evidence of syphilis within 1 year before enrollment. Multivariate logistic regression analysis limited to those who were receiving cART showed that higher CD4 counts [adjusted odds ratio (AOR): 1.17; 95% confidence interval (CI): 1.02–1.34], lower educational achievement (AOR: 1.95; 95% CI: 1.05–3.63), serosorting (AOR: 3.32; 95% CI: 1.04–10.63), and use of recreational drugs (AOR: 2.55; 95% CI: 1.26–5.13) were associated with syphilis.

Conclusion: Improved immune status, lower educational achievement, serosorting, and use of recreational drugs were associated with syphilis among HIV-infected MSM who were receiving cART. These findings suggest that strengthening client-specific counseling is needed to reduce risks for syphilis among HIV-infected MSM in Taiwan.

Copyright © 2013, Taiwan Society of Microbiology. Published by Elsevier Taiwan LLC. All rights reserved.

Introduction

Since 1996, the widespread use of combination antiretroviral therapy (cART) has not only lowered morbidity and mortality from human immunodeficiency virus (HIV) infection,^{1–3} but also improved the quality of life in patients living with HIV infection and acquired immunodeficiency syndrome (AIDS).^{4,5} However, rising rates of sexually transmitted infections (STIs) have been observed among patients living with HIV infection and AIDS who have access to cART.^{6,7} Several STI epidemics have been well documented in the HIV populations, especially in HIV-infected men who have sex with men (MSM).^{8–11} With the availability of cART, HIV-infected MSM who have achieved undetectable plasma HIV RNA load and favorable immunologic reconstitution have concerns with transmitting HIV to sexual contacts alleviated and are more likely to engage in unprotected sex,^{12,13} which may increase the risk for transmission of STIs and HIV.^{14,15} Those increased high-risk sexual behaviors among HIV-infected MSM were having unprotected sex with HIV-infected partners (serosorting), with partners whose HIV serostatus are unknown, or with casual partners.^{13,16–19} Furthermore, use of recreational drugs may further lead to an increase in high-risk sexual behaviors among MSM and HIV-infected MSM.^{20–22}

As of December, 31, 2012, 24,239 people living with HIV and AIDS have been reported to the Centers for Disease Control, Taiwan, and MSM accounting for 80% of newly diagnosed HIV infections have re-emerged as the leading risk group for HIV infection after control of the outbreak of HIV infection among injection drug users between 2003 and 2007.²³ A high prevalence and incidence of STIs has also been reported among HIV-infected patients and HIV-infected MSM in Taiwan,^{24–26} and more than 40% of the HIV-infected Taiwanese patients with syphilis failed to achieve a serologic response despite treatment.²⁷ In the case management program implemented among HIV-infected patients in Taiwan, 10.4% of the MSM developed new-onset syphilis during the 1st year of enrollment, and a

higher CD4 lymphocyte count and use of recreational drugs were found to be associated with incident syphilis in the MSM.²⁶ In the anonymous voluntary counseling and testing for HIV in northern Taiwan,²⁸ the overall prevalence of syphilis was 2.2%, and the incidence rate was estimated as 1.6/100 person-years. MSM, a history of STIs, and HIV infection were statistically significantly associated with syphilis, and use of recreational drugs and engaging in anal sex increased the risk of syphilis. However, little is known with respect to the role that the serostatus of sexual partners and the relationship with sexual partners may play in syphilis in Taiwan. This study aimed to identify factors that were associated with syphilis among HIV-infected MSM in Taiwan, where access to cART and related HIV care is provided free of charge.

Methods

Study population and setting

We conducted a cross-sectional survey at the National Taiwan University Hospital, the largest hospital designated for HIV care in Taiwan, from March 2011 to October 2011. Eligible participants were patients who identified themselves as MSM, were aged 20 years or older, and did not miss two previous clinic appointments that usually occurred every 1–3 months for those who initiated cART and 3–6 months for those who did not initiate cART. We invited eligible patients who were in the waiting area at the outpatient clinics. The average number of patients in each outpatient clinic was 35–50. It took about 15 minutes to complete the questionnaire. HIV-infected patients have free-of-charge access to HIV care, including testing for CD4 lymphocyte count and plasma HIV RNA load and cART, according to the national treatment guidelines for antiretroviral therapy. Laboratory tests for syphilis [rapid plasma reagin (RPR)] and viral hepatitis were recommended to be performed at least once every year and on an as-needed basis as dictated by the clinical presentation.

Download English Version:

<https://daneshyari.com/en/article/3377868>

Download Persian Version:

<https://daneshyari.com/article/3377868>

[Daneshyari.com](https://daneshyari.com)