

Abstract

Background: Men who have sex with men (MSM) accounted for 45.0% (2,862/6,362) of all the reported HIV-1 infection in Taiwan. The objective was to investigate the prevalence and risk factors among MSM from gay saunas in Taiwan.

Methods: Anonymous HIV-1 enzyme immunoassay, pre-test counseling and condoms have been given to MSM from gay saunas in Taiwan by a team comprise of a nurse and a educator since Jan. 2003. Questionnaires were collected in 2003 to 2004 for risk factor study using univariate and multivariate analysis. Seropositive cases were confirmed by Western Blot assay. HIV-1 subtypes were determined using PCR and DNA sequencing of HIV-1 gag, env and pol genes.

Results: The HIV-1 prevalence rates of MSM from gay saunas in Taiwan in years 2003 and 2004 were 6.9% (38/549) and 7.6% (33/434), respectively. In total, 71 of 983 (7.2%) MSM participated in this program had HIV-1 infection. 52 HIV-1 strains were genotyped and 51 of them were B subtype. 870 questionnaires of 983 MSM (88.5%) were collected in 2003 and 2004. According to the questionnaires, in this cohort, 39.5% of the participants have never been tested for HIV-1; 38.5% were single; 67.9% were homosexual and 29.7% were bisexual. The HIV-seropositive men were significantly younger than the seronegatives (29.7 b 6.5 vs. 33.8 b 9.8, $p < 0.0001$). Only 40.5% used condoms every time when they had sex. In comparison with the seronegatives, the HIV-1 seropositives had significantly shorter intervals between each visit (24.2 b 27.1 vs. 34.1 b 58.2, $p = 0.0287$) and higher numbers of sexual partners at saunas (1.9 b 1.2 vs. 1.5 b 1.2, $p = 0.0214$). 18.0% of the HIV-1-infected men had history of STD while only 11.8% of the HIV-1-uninfected men had that history. Multivariate logistic regression analysis (stepwise) showed that the risk factors for HIV-1 were: 1. age < 40 (OR = 3.963; 95% CI, 1.156-13.593); 2. versatile (top/bottom) role vs. top role (OR = 2.107; 95% CI, 1.053-4.217); 3. less frequent usage of condoms (OR = 3.067; 95% CI, 1.560-6.031); and 4. frequent drug usage (OR = 3.813; 95% CI, 1.222-11.899).

Conclusion: MSM from gay saunas in Taiwan had relatively high HIV-1 prevalence rates from 2003 to 2004. 7.2% (71/983) MSM participated in this program had HIV-1 infection. Most of them were infected with HIV-1 B subtype. Age less than 40, versatile role, unprotected anal intercourse (UIA) and drug usage were the four main risk factors for HIV-1 infection.

Keywords : MSM ; AIDS ; HIV-1 ; subtype