

Report on Scientific Meeting

The XIX International AIDS Conference

Reported by WH Leung 梁衛紅

| | |
|-----------|--|
| Date: | 22-27 July 2012 |
| Venue: | Walter E. Washington Convention Centre, Washington D.C., USA |
| Convener: | International AIDS Society |

The model demonstrated that PrEP, under these scenarios, would be more effective than condom promotion in all the countries apart from India, where a mixed heterosexual and MSM epidemic is ongoing. This model predicted that 25% of HIV infections could be averted in the next ten years in MSM using a combination of these methods. However, the magnitude of reduction relies heavily on programmes that improve uptake and adherence of all three methods.

Prevention science advances and challenges for MSM

Speaker: Dr. Patrick Sullivan
Associate Professor of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, USA

Men who have sex with men (MSM) are a group plagued by a high risk of HIV acquisition in many countries worldwide.

A mathematical model assessing the potential gains in reduction in HIV transmission among MSM in four scenarios, representing countries with different modes of HIV transmission was presented. Three different approaches to prevention were also applied to these models: intensive promotion on condom use, earlier treatment of HIV-infected MSM, and one with the addition of pre-exposure prophylaxis (PrEP) to the prevailing programme. Varying uptake and adherence of PrEP, anti-retroviral therapy (ART) uptake and condom use were modeled accordingly.

Learning points:

A combination approach to HIV prevention – intensified promotion on condom use, earlier treatment of HIV-infected MSM, and addition of PrEP – would be effective in reducing HIV transmission in some countries. However, uptake and adherence are crucial factors that determine their outcomes.

Use of a rapid HIV home test to screen potential sexual partners prevents HIV exposure in a high risk sample of MSM

Speaker: Prof. Alex Carballo-Diéguez

Professor of Clinical Psychology, HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute and Columbia University, New York, USA

The Food and Drug Administration of the USA approved the first rapid HIV test kit in July, 2012 to be available for purchase over-the-counter by persons who desire the privacy of undergoing the test at home.

The findings of a study recruiting a cohort of 27 MSM in New York engaging in high-risk sexual activities were presented. These MSM engaged in non-monogamous sexual activities and reported never or rarely using a condom. The objective of the study was to determine whether MSM would consider testing their sexual partners for HIV before engaging in sex. Each of them received 16 rapid test kits to be offered to their sexual partners for use at their discretion.

Among the 150 sexual partners over a three-month period, rapid HIV home tests were performed on 101 partners. Twenty-three partners were invited to test but they refused. Nine partners tested HIV-positive, among which five were aware of their status before the test. Sexual intercourse did not take place among those who tested positive or those who refused. Study subjects also found that the test was easy to use.

Another area studied was whether offering the test to one's sexual partner might trigger partner violence. Aggression was reported in only seven out of 124 occasions when the tests were offered. The findings demonstrated that rapid home test kits were acceptable to high-risk MSM and that risk behaviour modification might result.

Although the test proved promising as a harm-reduction strategy in this study, one must take into account a major limitation in its application – the window period before HIV infection could be detected. The rapid home test does not detect infection that was acquired recently, and therefore may give a false sense of security when one of the partners is in fact highly infectious.

Learning points:

Rapid HIV home test recently made available for over-the-counter purchase in the USA might be useful as a screening test before sexual intercourse among high-risk MSM. However, there is a genuine possibility of under-diagnosing early infection and hence, increased risk of transmission.

Perceptions and attitudes about PrEP among seronegative partners and the potential of sexual disinhibition associated with the use of PrEP

Speakers: Dr. Wayne Duffus

Director for HIV and STD Medicine, South Carolina Department of Health and Environmental Control, Bureau of Disease Control, Columbia, USA

Two key studies on PrEP were published in 2010 and 2011 which reported that antiretroviral drugs reduced HIV transmission when prescribed to HIV-negative individuals at high risk of acquiring HIV e.g. partner of a HIV-positive person. The reduced transmission was observed in both heterosexual and MSM sero-discordant couples. The Food and Drug Administration subsequently approved the use of a combination pill composed of tenofovir and emtricitabine (Truvada) as prophylaxis for high-risk HIV-negative individuals. In this session, a study which highlighted the challenges of putting to use this strategy in the public health arena was presented.

The study presented was conducted among 89 seronegative partners of HIV-positive persons in the USA. It revealed that more than a quarter of respondents would be more likely to have unprotected sex with an HIV-positive partner after taking PrEP. Concerning the adherence to PrEP, a similar proportion expected difficulty taking PrEP every day and using condoms consistently.

Learning points:

PrEP is part of a combination approach to HIV prevention only if at risk population are adherent to the prophylaxis. Risk compensation, i.e. persons on the prophylaxis engaging in high-risk sexual activities as they anticipate lower risk, might undermine the effectiveness of this strategy.

Hormonal contraception and HIV acquisition in women: a systematic review of the epidemiological evidence

Speaker: Dr. Chelsea Polis

Epidemiological advisor, USAID, Office of Population and Reproductive Health, Washington, USA

There has been much discussion over the findings of a study which demonstrated that women who were on any type of hormonal contraception had an increased risk of acquiring HIV if she was HIV-negative, and of transmitting HIV to her partners if she was HIV-positive. In particular, it was found in the study, that injectable contraceptives pose a 2.6 times risk of acquiring HIV, and the use of the injectable depot medroxyprogesterone acetate (DMPA) increased the risk to 3.4 times.

USAID 'United States Agency for International Development', Office of Population and Reproductive Health and Centres for Disease Prevention in the USA, in view of the alarming findings, conducted a meta-analysis of 14 studies on the subject. All studies, after adjusting for confounders, showed no association of HIV acquisition in women and use of hormonal contraceptives, except one study on injectables. Sensitivity analysis took into account sero-discordant status, time elapsed between surveys and condom use. The examination on DMPA data suggests that the information available does not demonstrate a causal relationship or conclusively rule out the possibility on HIV acquisition.

This highlighted the controversy surrounding the use of hormonal contraceptives in HIV-positive women. More studies in this area are certainly warranted. It is however important not to overlook the potential of hormonal contraception as an effective form of contraception for women in high-risk setting, where the risks of complications and death from an unwanted pregnancy are high. It was concluded that it was prudent to inform women of the risks and benefits of using hormonal contraception and the alternatives available.

Learning points:

The study on the risk of HIV acquisition among users of hormonal contraception yielded heterogeneous results. Potential users should be alerted to the risks and benefits of these contraceptive options. The use of condoms in HIV prevention could not be over-emphasised.