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No increase in HIV incidence observed in a cohort of men who have sex with other men in Montreal

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To monitor HIV incidence we tested a cohort of men who have sex with men in Montreal for HIV every 6 months. Between 1996 and 2001, 17 out of 1244 participants seroconverted, for an HIV incidence of 0.56 per 100 person-years (py) (95% CL 0.29, 0.83). The incidence decreased over the study period, from 0.75 to 0.34 per 100 py; which was not statistically significant. An in-depth evaluation of the situation in Montreal could identify useful lessons for prevention efforts elsewhere.

Men who have sex with men (MSM) have been severely affected by the HIV epidemic and, in industrialized countries, make up the majority of HIV-infected individuals. The incidence of HIV among MSM was generally highest early in the epidemic and, as a result of marked reductions in risky sexual behaviours, has decreased since then. HIV prevalence in this group is generally 10–20% [1,2]. Beginning in 1996, new combination highly active antiretroviral therapy (HAART) regimens markedly improved the prognosis of HIV infection, resulting in plummeting rates of AIDS and death. Subsequently, however, studies in north America, Europe and Australia have observed a recrudescence in the incidence of bacterial sexually transmitted diseases (STD) [3,4], high risk sexual behaviours [5,6] and in some jurisdictions the incidence of HIV [7,8]. One US study [9] reported that high-risk behaviours were associated with a reduced concern about becoming infected as a result of HAART.

In October 1996, we began recruiting HIV-seronegative MSM in Montreal to measure the incidence of HIV and its behavioural determinants. We obtained informed consent and, at baseline and 6 month follow-up visits, tested participants for HIV and collected data on sexual behaviours. Up to February 2001, 1588 MSM enrolled in the study. The drop-out rate was 14% at the second visit, decreasing to 8% for subsequent visits. A total of 1244 participants attended for one to eight follow-up visits, contributing 3027 person-years (py) of observation.

We observed 17 seroconversions for an HIV incidence of 0.56 per 100 py (95% confidence limits 0.29, 0.83). Incidence decreased over the study period, from 0.75 per 100 py in 1996–1997 to 0.34 per 100 py in 2000–2001. This decreasing trend

was not, however, statistically significant. The incidence of HIV overall was 0.96 per 100 py in MSM less than 30 years old compared with 0.38 per 100 py in those aged 30 years or older. However, the incidence of HIV was actually greater in older MSM in the first 15 months of the study but has been lower since then (see Fig. 1).

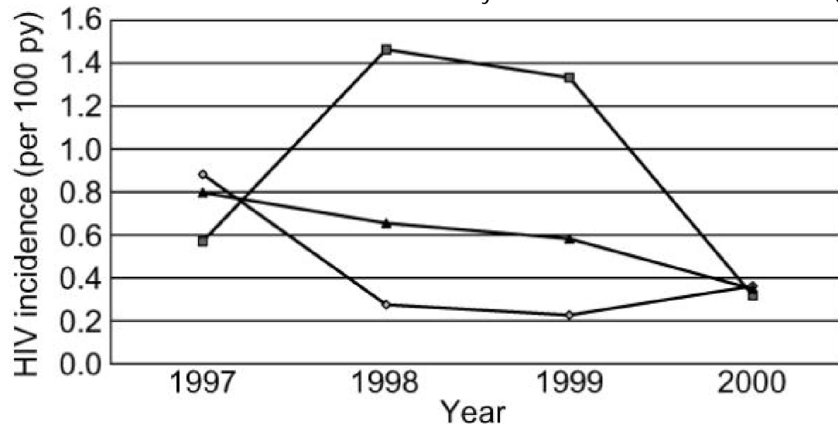

Fig. 1. HIV incidence by calendar year and age (Omega Cohort Study, Monteal, 1997–2000). --[black small square]-- Less than 30 years; --[diamond operator]-- 30 years or older; --[black up pointing small triangle]-- all ages.

We examined the incidence of HIV as a function of calendar time and the number of visits in the study to determine whether the decreasing trend in HIV incidence may be the result of a 'cohort effect'. Incidence among those in the study for longer may be lower because of such factors as repeated counselling and a selective drop-out of higher-risk MSM. This analysis indicated no obvious cohort effect.

Although we observed a decreasing trend in HIV incidence in a cohort of MSM in Montreal, it is too early to conclude that the incidence of HIV is really decreasing. Nevertheless, it is clear that the incidence of HIV is not increasing. Our study monitored sexual behaviour, and we observed a modest increase in the proportion of men reporting risky behaviour. Unprotected anal sex with a casual partner between April 1997 and September 1998 was reported by 8.7% of participants, between October 1998 and September 1999 it was reported by 10.1%, and from October 1999 to September 2000, by 9.8%. The proportion reporting unprotected anal sex with any partner other than an HIV-negative regular partner also increased slightly: April 1997 to September 1998, 16.0%; October 1998 to September 1999, 16.1%; and October 1999 to September 2000, 18.1%. None of these increases, however, were statistically significant [10].

STD may be a useful indicator of sexual behaviours that place MSM at risk of HIV infection. The reported rectal gonorrhoea cases among men in Montreal increased 39% during the course of our study, from 19 in 1996 to 26.5 in 1997–2000 (R. Parent, personal communication, 2001). Montreal also experienced a marked increase in reported cases of infectious syphilis in the period September 2000 to July 2001, mostly among homosexual men [11]. During this 10 month period, 16 cases (13 MSM) were reported compared with the usual one to three cases.

Participants in our study had reported an STD diagnosis in the previous 6 months as follows: gonorrhoea 1.5%, chlamydia 1.1%, syphilis 0.1%, herpes 0.8%, and genital warts 2.0%. An increasing trend was observed for gonorrhoea (1.6% in 1998–

2001 versus 0.8% in 1997) and chlamydia (1.4% in 1999–2001 versus 0.5% in 1997–1998). The 1.9-fold increase for gonorrhoea was not statistically significant. The 2.7-fold increase in chlamydia ($P < 0.01$) coincided with the introduction of the ligase chain reaction assay, a more sensitive test than those used previously. We also tested participants for syphilis at each visit; to date, we have observed one confirmed and one possible new syphilis infection.

The data on sexual behaviour and STD among MSM in Montreal suggest a potential for increased HIV spread in this population. Nevertheless, bacterial STD and HIV incidence do not necessarily vary concordantly, partly as a result of public health measures undertaken to interrupt the transmission of bacterial STD, and because the subpopulations affected may not be the same.

Our observation of stable or decreasing HIV incidence contrasts with other major urban centres in Canada. A study among individuals testing at least twice [12] observed that the incidence of HIV among MSM in Toronto, a city of comparable size and HIV epidemiology to Montreal, increased 78% from 1996 to 1999. A cohort of MSM under 30 years of age in Vancouver [8] observed a threefold increase in the incidence of HIV in 1999–2000 compared eith 1995–1999.

Our study results do not indicate why Montreal appears to be spared from the increased HIV incidence observed elsewhere. Recently, we added questions about HAART and post-exposure prophylaxis to obtain a better understanding of these factors and to compare our situation with that elsewhere [13]. In Canada, the HIV epidemic among MSM has been historically comparable in Montreal, Toronto and Vancouver. However, Montreal is the only major urban centre in Canada with an organization dedicated solely to HIV prevention among MSM. Action Séro-Zéro distributes condoms in bars and bathhouses, provides small group workshops on self-esteem and affirmation, ageing, social networking and sexuality, and targets interventions to young gay men, male prostitutes and ethnocultural minorities. These interventions are regularly evaluated. Prevention activities have been intensified and diversified since 1996, when HAART arrived. This was apparently not the case in cities such as New York [14] and Paris [15], and in the rest of Canada. Montreal may thus have more sustained, co-ordinated HIV prevention programmes among MSM than other Canadian cities. Finally, most MSM in Montreal are French-speaking, and may be somewhat isolated from discussions on such subjects as 'barebacking'. An in-depth comparison of the situation in Montreal with that in other cities could help to identify useful lessons for prevention efforts elsewhere.

References

1. Catania JA, Osmond D, Stall RD. et al. The continuing HIV epidemic among men who have sex with men. Am J Public Health 2001, 91: 907–914. Ovid Full Text Bibliographic Links [Context Link]
2. Remis RS, Major C, Calzavara L, Myers T, Burchell A, Whittingham EP. The HIV epidemic among men who have sex with other men: the situation in Ontario in the year 2000. University of Toronto, November 2000. 58 pp. [Context Link]
3. Stolte IG, Dukers NH, de Wit JB, Fennema JS, Coutinho RA. Increase in sexually transmitted infections among homosexual men in Amsterdam in relation to HAART. Sex Transm Infect 2001, 77: 184–186. Ovid Full Text Bibliographic Links [Context Link]

4. Martin IM, Ison CA. Rise in gonorrhoea in London, UK. London Gonococcal Working Group. Lancet 2000, 355: 623.623. Full Text Bibliographic Links [Context Link]

5. Denning P, Nakashima AK, Wortley P. Increasing rates of unprotected anal intercourse among HIV-infected men who have sex with men in the United States. In:13th International AIDS Conference. Durban, South Africa, July 2000 [Abstract ThOrC714]. [Context Link]

6. Van de Ven P, Prestage G, French J, Knox S, Kippax S. Increase in unprotected anal intercourse with casual partners among Sydney gay men in 1996-98. Aust NZ J Public Health 1998, 22: 814-818. Bibliographic Links [Context Link]

7. Kellogg T, McFarland W, Katz M. Recent increases in HIV seroconversion among repeat anonymous testers in San Francisco. AIDS 1999, 13: 2303-2204. Ovid Full Text Request Permissions Bibliographic Links [Context Link]

8. Hogg RS, Weber AE, Chan K. et al. Increasing incidence of HIV infections among young gay and bisexual men in Vancouver. AIDS 2001, 15: 1321-1322. Ovid Full Text Request Permissions Bibliographic Links [Context Link]

9. Lehman JS, Hecht FM, Wortley P, Lansky A, Stevens M, Fleming P. Are at risk populations less concerned about HIV infections in the HAART era? In:7th Conference on Retroviruses and Opportunistic Infections. San Francisco, CA, USA, January-February 2000 [Abstract 198]. [Context Link]

10. George C, Alary M, Remis RS. et al. Are gay men finally getting the message? Stable trends in high risk taking behaviours among men having affective and sexual relations with men (MASM) in Montreal. Can J Infect Dis 2001, 12 (Suppl. B):63B.63B. [Context Link]

11. Lambert G. Increase in cases of infectious syphilis in Montreal - update [Technical report]. Montreal Regional Public Health Department. 23 July 2001. [Context Link]

12. Calzavara L, Burchell A, Major C, et al. Increasing HIV incidence among MSM repeat testers in Ontario, Canada, 1992-1998. Proceedings of the XIIIth International AIDS Conference, Volume II, Pages 381-382 [Abstract THOrC718], Durban, South Africa, July 9-14, 2000. [Context Link]

13. Phair JP, Ostrow DG. Risk-taking in the era of highly active antiretroviral therapy. Curr Infect Dis Rep 2001, 3: 101-102. [Context Link]

14. Warner M. The trouble with normal, sex, politics and the ethics of queer life. Cambridge, MA, USA: Harvard University Press; 1999. [Context Link]

15. LeTalec JY. Le risque du sexe entre rumeur et réalité. Research report (http://www.multisexualités-et-sida.org/prevention/rapport/rapport4.html). Accessed February 22, 2001. [Context Link]