

Substance Use Among Gay Men Specific to Encounters with Casual Sexual Partners of Unknown HIV Serostatus and Relation to High Risk Sex

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Background

- The possible relation of recreational drugs and non-use of condoms during encounters with casual partners is unknown. Previous surveys have been non-specific.
- During 1997-2002 we observed significant increases in both *substance use* and *unprotected anal intercourse (UAI) with casual partners* in a cohort of HIV-seronegative gay men
- This type of sexual encounter was a strong, independent risk factor for HIV seroconversion in this cohort (adjusted odds ratio=4.9)
- We therefore conducted a cross-sectional survey that asked both about the **use of condoms and substances used specifically during sexual encounters with casual partners whose HIV status is unknown.**

Objectives

- Measure the association of substance use and UAI specific to encounters with casual partners whose HIV status is unknown

Methods

- The Vanguard Project is a prospective study of HIV-1 seroincidence and behavioral risk factors among MSM < 35 years old
- Self-administered, cross-sectional survey administered during 2002-2003
- Male sex trade workers and prevalent HIV+ MSM were excluded from this analysis
- Odds ratios (OR) and 95% confidence intervals (CI) were used to measure associations

Results

- 275 HIV-negative men
- Mean age 31 ± 4 years, 69% were white, 9% First Nations; 62% were employed full-time; and 54% completed college [TABLE 1].
- The overall percentage of men using specific substances (at any time during the previous year, not just around the time of sex with casual partners) is shown in TABLE 2.
- A median of 5 (interquartile range 2, 21) casual sexual partners were reported by 187 (68%) of the men, among whom 139 reported anal intercourse and 65 UAI.
- UAI with casual partners of unknown HIV serostatus was reported by 49/99 men [median frequency: 2 (1, 4) times insertive and 1 (1,2) times receptive].
- Three drugs used within 2 hours of sexual encounters with casual partners whose HIV status was unknown were strongly associated with non-use of condoms during such encounters:**

Ketamine (OR 11.0)
GHB (OR 6.9)
Ecstasy (OR 4.6) [TABLE 3].

- Among reasons cited for non-use of condoms with such partners, 60-70% of men reported “being carried away” and that “the sex was too hot”.
- Drugs not associated included marijuana, methamphetamine, and cocaine.
- Importantly, these associations were *NOT* observed for UAI engaged in with HIV-negative casual partners (reported by 36% of 74 men) [TABLE 3].

Table 1: Characteristics of Participants, 2002-2003 (N=275)

FACTOR	N	(%)
Race-Ethnicity		
White	60	(22)
Other	189	(69)
Aboriginal	25	(9)
Stable Housing	264	(96)
Any College	143	(54)
Full Time Employed	165	(62)
Casual Sex Partner^a	187	(68)
Anal Receptive ^a	103/178	(58)
Unprotected Anal Receptive ^{a,b}	37/103	(36)
Anal Insertive ^a	119/181	(66)
Unprotective Anal Insertive ^{a,c}	51/119	(43)
Any anal intercourse ^a	139/182	(76)
Any unprotected anal intercourse ^{a,d}	65/139	(47)
High Risk ^{a,e}	32/275	(12)

- a: in previous twelve months
b: among men engaging in receptive anal intercourse
c: among men engaging in insertive anal intercourse
d: among men engaging in anal intercourse
e: unprotected receptive anal intercourse with a partner whose HIV serostatus is positive or unknown

Table 2: Any use of drugs during previous twelve months^{a,b} (n = 275)

DRUG USE	N	(%)
Alcohol	246	(90)
Marijuana	144	(55)
Cocaine	58	(23)
Crystal Methamphetamine	51	(20)
Ketamine	29	(11)
Ecstasy	74	(29)
GHB	37	(15)

- a: any use, whether or not around the time of sex
b: crack, speed LSD and heroin use were mentioned only rarely

Table 3: Crude odds ratios for the association of unprotected anal intercourse and use of specific drugs used during sex with casual partners, by HIV status of partners

SUBSTANCE	HIV Status Unknown	HIV Status Negative
Alcohol	1.6 (0.6 – 4.4)	0.81 (0.28 – 2.32)
Marijuana	1.2 (0.5 – 2.9)	0.74 (0.27 – 1.98)
Cocaine	1.6 (0.5 – 4.5)	3.07 (0.78 – 12.67)
Crystal Methamphetamine	2.0 (0.6 – 6.5)	1.91 (0.50 – 7.31)
Ecstasy	4.6 (1.4 – 15.2)	1.71 (0.54 – 5.38)
GHB	6.9 (1.5 – 33.2)	0.86 (0.45 – 5.04)
Ketamine	11.0 (1.3 – 90.7)	2.81 (0.44 – 18.00)

Conclusions

- Our results are consistent with previous studies that suggest a relation between use of ‘club’ drugs and UAI.
- However, we have demonstrated this relation to be specific to casual partners with unknown HIV status, the type of encounter most strongly associated in this cohort with HIV seroconversion.
- Disinhibiting effects of these three drugs are NOT likely to explain this association**, since a similar association was *NOT* observed with casual partners whose serostatus was negative.

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