Drug Users at Detoxification Clinics in Puerto Rico

RR Robles, EdD (1), HM Colón, MA (2), N Díaz, MA (2), R MacGowan, MPH (3), LI Cancel, M.S. (2), GE Cole, Ph.D., M.P.H. (3), DM Allen, M.D., M.P.H. (4)

1. Research Institute, DAAS/CESR, Sch. Public Health, University of Puerto Rico
2. Research Institute, Puerto Rico Dept. of Anti Addiction Services
3. Behavioral & Prevention Research Branch, Div. of STD/HIV Prevention, NCPS, CDC, Atlanta
4. HIV Seroepidemiology Branch, Div. of HIV/AIDS, NCID, CDC, Atlanta

Introduction

The ethnic and geographic variations of AIDS in injection drug users (IDUs) have highlighted the need to understand the role of other relevant risk factors in specific sub-populations of IDUs.

In this study we report results on the behavioral risk factors associated with HIV seropositivity in a cohort of IDUs, patients of the three public detox clinics serving the San Juan metro area. Puerto Rican IDUs are of concern since the AIDS epidemic has affected them extensively, and the epidemic among Puerto Ricans shows important differences from other population groups.

Heterosexual IDUs comprise more than 50% of all AIDS cases in Puerto Rico. Moreover, the island has an AIDS incidence rate of 49.6 per 100,000 population, the second highest among all US states and territories. Further specifications of the mechanisms of HIV transmission in populations of IDUs are needed to enhance the relevance of policy development.

Methods

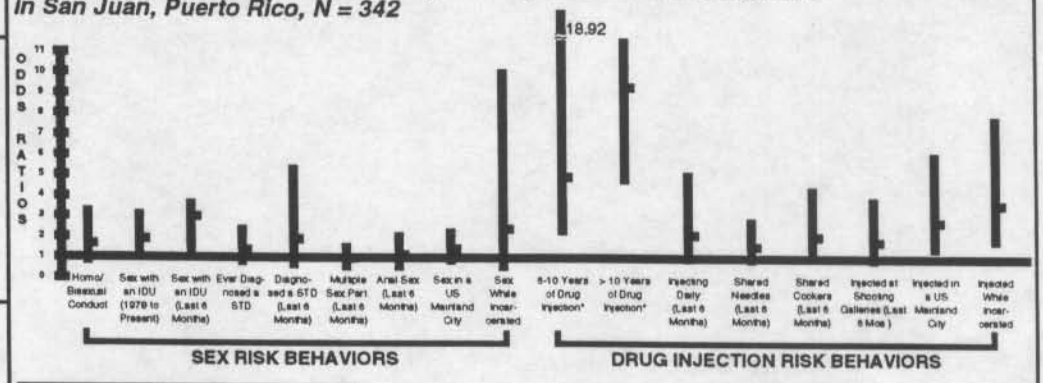
Subjects were recruited at three detoxification clinics as part of an ongoing seroepidemiologic and follow-up study of IDUs. To be eligible, subjects must have injected drugs at least once during the past 12 months, and be at least 18 years of age. From October, 1990 to August, 1991, project interviewers contacted 586 detoxification patients who were found eligible and invited to participate in the study. This report is based on 390 IDUs who consented to participate, 342 of whom agreed to be tested for HIV antibodies.

Bivariate odds ratios and their 95% confidence intervals were calculated to examine the HIV seropositivity risks associated with the reported behavioral factors. A stepwise (with backward elimination) multiple logistic regression was used to simultaneously assess the independent effects of the behavioral risk factors on HIV seropositivity.

Sample Profile

Males comprised the majority of the sample (84.9%), the mean age was 30.1 years, and two fifths (43.1%) had not completed high school. On average, the study participants had been injecting drugs for 9.8 years. Three quarters (76.5%) of the IDUs had lived in the Mainland and over half (54.9%) reported a previous incarceration. The HIV seroprevalence rate of the cohort was 29.5%.

Bivariate Odds Ratios and 95% Confidence Intervals of Sex and Drug Injection Risk Behaviors on HIV Seropositivity Among IDUs in Detox Programs in San Juan, Puerto Rico, N = 342



* Reference value is ≤5 years of drug injection

Bivariate Analyses

In the sex risk domain, reports of sex with another IDU, both since 1978 and during the last 6 months, were the only behaviors found significantly associated to HIV seropositivity. In the drug injection risk domain, years of drug injection and the shared use of cookers (a small cap or utensil where the drug is dissolved in water) were associated to seropositivity . Drug injection with used needles in Mainland US cities and reports of drug injection while incarcerated were also related to seropositivity.

Results of Stepwise Multiple Logistic Regression Analysis on HIV Seropositivity*

	Odds Ratio	95% CI		p
Female Sex	1.94	0.91	4.13	.089
Sex with an IDU**	1.92	1.03	3.59	.041
Years Injecting Drugs				
≤ 5 years***				
6 - 10 years	4.74	2.10	10.67	≤.001
> 10 years	9.63	4.63	20.03	≤.001
Injected in Jail****	3.63	1.64	8.03	.002

*The following variables were excluded through backward selection: Age, Education, Sex with an IDU (1978 to Present), Ever Diagnosed a STD, Diagnosed a STD (Last 6 Months), Multiple partners (Last 6 Months), Anal Sex (Last 6 Months), Drug Injection Frequency, Shared Needles (Last 6 Months), Shared Cookers (Last 6 Months), Injected at Shooting Galleries (Last 6 Months), Ever in a US City, Had Sex While in a US City, Injected in US Cities with Used Needles, Ever Incarcerated, Had Sex While Incarcerated. Complete information on 332 cases. # **Sex with an IDU During the Last Six Months. # ***Reference value. # ****Injected in Jail with Used Needles (Ever).

Multivariate Analyses

Positive associations with seropositivity were found for sex with an IDU in the last six months, more than five years of drug injection, and drug injection in jail with used needles. Seropositivity odds ratios show a substantial increase with increases in the number of years of drug injection: 3.87 (six to ten years) and 7.56 (more than ten years). Drug injection in jails represented more than a fourfold (4.44) increase in the odds of seropositivity.

Conclusion

The findings in this study are consistent with previous reports of IDUs in the San Juan Metropolitan Area. They show a high seroprevalence rate among IDUs and replicate a strong trend of increases in the number of years of drug injection associated with increases in the odds of being seropositive. In addition, our data expand upon previous findings associating a history of incarcerations with HIV infection among IDUs.

This study supports our previous finding of a strong correlation between years of drug injection and HIV seropositivity. A pattern of increased seropositivity with increased duration of drug injection has also been reported in addicts from New York City, but data from Baltimore did not support this association. These geographical differences may be markers of differences in the dates of first introduction of the HIV virus in addicts' communities.

Unsafe drug injection within correctional institutions was highly correlated with seropositivity. In this study, 80% of the subjects reported a previous incarceration episode. A history of incarceration had been previously found to be associated to HIV seropositivity among IDUs in Puerto Rico. Our data expand these findings by demonstrating increased risk of seropositivity from a specific behavior practiced in correctional settings. In the multivariate analysis the association between previous incarceration episodes and serostatus was not sustained. It was the practive of injecting drugs with unsterilized needles within correctional settings which sustained an independent effect on seropositivity. This finding suggests an urgent need for innovative and aggressive interventions in correctional institutions in order to reduce the specific risk behaviors prevalent among drug injecting inmates.

Presented at the VIII International Conference on AIDS, 19-24 July, 1992.