Increasing Frequency of Heterosexually Transmitted AIDS in Southern Florida: Artifact or Reality?

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ABSTRACT

Acquired immunodeficiency syndrome (AIDS) cases reported as the result of heterosexual contact have been increasing in the United States, with Florida reporting a disproportionate number. We investigated 168 such AIDS cases from southern Florida. After follow-up, 50 (30%) patients were reclassified into other transmission categories. The data suggest that the increased rate of heterosexually acquired AIDS cases reported from southern Florida was partially related to misclassification of risk. (*Am J Public Health.* 1993;83: 571–573)

Introduction

Worldwide, heterosexual transmission is the predominant mode of human immunodeficiency virus (HIV) transmission. In certain areas, including the United States, HIV infection occurs primarily through male homosexual contact and injecting drug use.[1–3] However, since the mid-1980s, the number of reported heterosexually transmitted cases of acquired immunodeficiency syndrome (AIDS) in the United States has been steadily increasing (Figure 1). A disproportionate number of these cases has been from Florida, which reported 9% of all US AIDS cases in other transmission categories through 1991 but 24% of the cases attributed to heterosexual transmission.[4] Most (71.2%) of the heterosexual contact cases reported from Florida were from three contiguous southern counties: Dade, Palm Beach, and Broward. Additionally, in all states except Florida, the number of women with AIDS attributed to heterosexual transmission exceeds that of men.

These striking differences between the epidemiology of heterosexually acquired AIDS in southern Florida compared with that in the remainder of the United States prompted us to review the cases in more detail.

Methods

AIDS cases from Broward and coastal Palm Beach counties that were diagnosed and reported to the Florida Department of Health and Rehabilitative Services from January 1, 1989, through March 31, 1990, were included in the study. The study was limited to these areas because of their geographic and economic similarities.

All 168 AIDS cases attributed to heterosexual contact in these two areas reported sexual contact with bisexual men, injecting drug users, or persons born in countries where heterosexual transmission is the predominant mode of HIV transmission (Pattern II).[1–2] Medical records of patients, in addition to records from social services, HIV counseling and testing centers, and sexually transmitted disease clinics, were reviewed.

If no other HIV risk factor was identified from medical record review, patients were interviewed using a standardized questionnaire. The questionnaire was designed to elicit information about various possible exposures to HIV such as receipt of blood or blood products, use of injecting and noninjecting drugs, and sexual behavior history, including previous sexually transmitted diseases. If patients could not be interviewed, attempts were made to interview a proxy (family member or close friend).

Data analysis was performed using Epi Info version 5.01.[5]

Results

Demographic characteristics of the 168 patients in the study are shown in Table 1.

After sexually transmitted disease clinic and other medical records were reviewed, 29 men and 7 women were reclassified into other HIV transmission categories. (Table 2). These risk factors were documented in medical records after the AIDS case report had been submitted to the Department of Health and Rehabilitative Services. Attempts were made to interview all 132 remaining patients who could not be reclassified based upon record review; 97 were located and interviewed and 14 of them were reclassified

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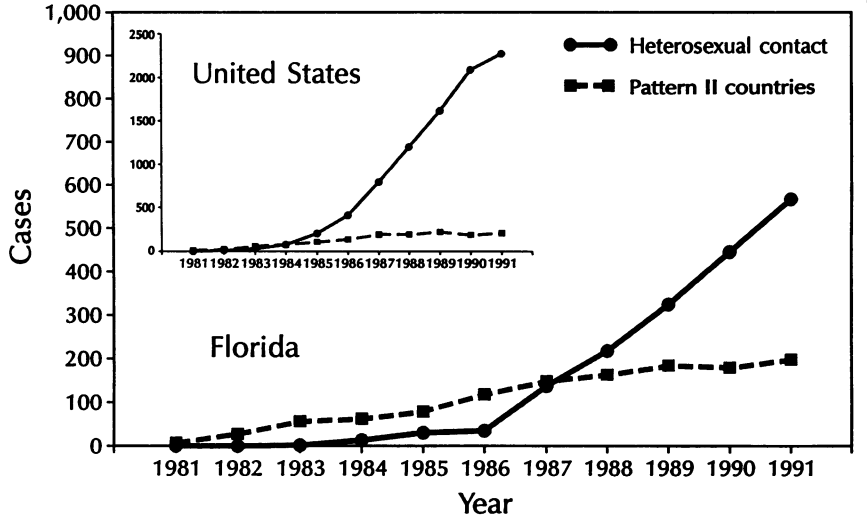

FIGURE 1—Trends in the number of AIDS cases classified as heterosexually acquired and from Pattern II countries, in Florida and the United States, by year of diagnosis, 1981 through 1991, reported through August 31, 1992.

TABLE 1—Characteristics of Patients Reported with Heterosexually Acquired AIDS[a,b] in Broward and Palm Beach Counties, Florida

	Males (n = 99)		Females (n = 69)		Total (n = 168)	
	No.	%	No.	%	No.	%
Age, y						
19–29	18	18	15	22	33	20
30–39	47	48	33	48	80	48
40–49	22	22	7	10	29	17
50+	12	12	14	20	26	16
Race/ethnicity						
Black	86	87	57	83	143	85
White	9	9	8	12	17	10
Hispanic	4	4	3	4	7	4
Place of birth						
United States	48	49	38	55	86	51
Outside United States	51	52	31	45	82	49
Pattern II countries	42	82	28	90	70	85
Caribbean/Central/South America	7	14	3	10	10	12
Europe	2	4	0	0	2	2

[a]Data from January 1, 1989, through March 31, 1990.
[b]Heterosexually acquired AIDS patients include persons with specific heterosexual contact with a person with or at increased risk for HIV infection (e.g., injecting drug users, bisexual men, persons with hemophilia/coagulation disorders, recipients of blood transfusion or other blood products, or persons presumed to have acquired HIV infection through heterosexual transmission because they were born in countries where such transmission is believed to play a major role in the spread of HIV [Pattern II]).

(Table 2). The 35 patients who could not be interviewed were similar in age, gender, and race/ethnicity to those who were interviewed.

After adjustments were made for the reclassification, the percentage of AIDS cases reported from Palm Beach and Broward counties between January 1, 1989, and March 31, 1990, that was attributed to heterosexual transmission decreased from 10% to 6% among men and from 33% to 28% among women. The reclassification rate was lower for those born in Pattern II countries than for those born in the United States and other non-Pattern II nations; 9/42 (21.4%) versus 31/57 (54.4%), respectively, for men and 3/28 (10.7%) versus 7/41 (17.1%), respectively, for women.

Data for all interviewed patients who were not reclassified are shown in Table 3. Each had multiple sexual partners (median of 13 for men, 4 for women). Each patient reported one or more factors associated with increased HIV transmission. These factors were similar for those born in Pattern II countries and those born in the United States and other non-Pattern II countries.

Discussion

Follow-up record review and interviews resulted in the reclassification of 50 (29.8%) of 168 AIDS patients initially reported as having acquired AIDS through heterosexual contact. In addition, 10 (31.3%) of 32 men who were interviewed but not reclassified had anorectal pathologies, suggesting that some of them may have had sexual intercourse with other men but did not report this behavior.

The reclassification of patients, especially men, suggests that the increase in heterosexually acquired AIDS cases in Florida is occurring at a lower rate than had originally been reported. Reports of heterosexual exposure to HIV by patients (especially men) may be related to a tendency of these persons to report heterosexual contact to avoid the stigma associated with other HIV risk factors, such as sex with other men or injecting drug use.[6,7] It also reflects the identification of additional risk factors later in the course of illness, after the case report has been submitted to the health department.

Few patients born in Pattern II countries were reclassified into other transmission categories. Social differences and language barriers may have prevented these patients from sharing risk information with their health care practitioners and interviewers, but it is also likely that many of these patients were infected through heterosexual contact in their country of origin. However, health care practitioners should not assume heterosexual contact simply because a patient was born in a Pattern II country.

After adjustment for reclassification, the percentage of heterosexual transmission among women remained higher than that among men, which may suggest a higher rate of male-to-female transmission. Heterosexual HIV transmission is thought to be more efficient through male-to-female sexual contact than through female-to-male sexual contact.[8–12]

Although the percentage of heterosexually transmitted AIDS cases in southern Florida decreased after adjustment was made for reclassified cases, it nonetheless remained above the national average. Misclassification and increased migration (especially among persons

TABLE 2—Patients Initially Reported with Heterosexually Acquired AIDS and Later Reclassified into Other Transmission Groups, Broward and Palm Beach Counties, Florida[a]

Status	Men		Women		
	Pattern II[b]	United States & Other[c]	Pattern II	United States & Other	Total
Reclassified through medical or sexually transmitted disease clinic record review	8	21	1	6	36
Transmission categories reclassified into MSM[d]	5	8	...	...	13
Injecting drug use	2	12	0	6	20
MSM-IDU[e]	1	1	0	0	2
Transfusion recipient	0	0	1	0	1
Interviewed	24	32	13	28	97
Reclassified through interview	1	10	1	2	14
Transmission categories reclassified into MSM[d]	1	5	...	...	6
Injecting drug use	0	4	0	1	5
MSM-IDU[e]	0	1	0	0	1
Transfusion recipient	0	0	2	0	2
Total reclassified	9	31	3	7	50

[a]Data from January 1, 1989, through March 31, 1990.
[b]Includes patients born in countries where heterosexual contact is the predominant mode of HIV transmission.
[c]Includes patients born in US and other non-pattern II countries.
[d]Men who report sex with other men.
[e]Men who report sex with other men as well as a history of injecting drug use.

TABLE 3—Selected Characteristics Associated with HIV Transmission among Heterosexual Contact AIDS Patients in Broward and Palm Beach Counties, Florida,[a] Who Were Interviewed But Could Not Be Reclassified

	Men (n = 45), %	Women (n = 38), %	Total (n = 83), %
Sex with injecting drug users	15.6	48.6	32.1
Sex with a partner infected with HIV	28.1	34.3	31.2
Sex with bisexual males	...	2.9	...
Exchange money/drugs for sex	59.4	14.3	36.9
Noninjecting drug use			
Marijuana	34.4	22.9	28.7
Crack cocaine	21.9	20.0	21.0
History of any sexually transmitted diseases	71.9	31.4	51.7
Anorectal pathologies[b]	31.3	8.6	20.5
Ever used condoms	9.4	5.7	7.6

[a]Data from January 1, 1989 through March 1990.
[b]Includes ulcers, discharges, and trauma associated with the anus or rectum.

from Pattern II areas) combine to maintain the high numbers of such AIDS cases reported from southern Florida. Studies are needed in other areas to determine the magnitude of AIDS cases misclassified as being heterosexually acquired. With increasing caseloads and limited personnel, health departments may find it increasingly difficult to conduct in-depth investigations to ascertain other risk factors for patients reporting heterosexual contact with an HIV-infected person as their only potential exposure. Nevertheless, accurate monitoring of trends in the exposure categories of reported AIDS cases is needed as surveillance data provide important information on the evolving epidemiology of heterosexually transmitted HIV infection in the United States. □

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