Contraceptive measures and HIV transmission protection among women with HIV/AIDS

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Keywords
Sex behavior. Contraception. Women. Acquired immunodeficiency syndrome, transmission. HIV infections, transmission. Socioeconomic factors. Women's health. Health education.

Abstract

Objective
Sexual intercourse is currently the route of transmission among women that has most contributed to the feminization of the HIV/AIDS epidemic. As an ongoing effort to establish more appropriate standards for health counseling, the study's purpose was to investigate the use of contraceptive methods that would also prevent HIV/AIDS women against disease transmission.

Methods
An exploratory study was developed in an outpatient clinic of a public university hospital, a reference center of HIV/AIDS patients in the mid-south region of the state of São Paulo, Brazil, during a 5-month-period (2000 and 2001). The study was carried out in 73 HIV/AIDS women. Data were collected using a semi-structured questionnaire exploring subjects' sociodemographics, contraception method used and HIV status of their sex partners. A descriptive data analysis was performed and the contents of open answers were grouped into themes. Fischer's exact test was applied for analyzing some variables at a 5% significance level. Content analysis was carried out according to Bardin's proposal.[2]

Results
Most women at reproductive age were married and had been infected almost exclusively through heterosexual contact. Of them, 35.4% reported having an HIV discordant partner and 13.7% used inadequate contraceptive methods that failed to protect them against HIV transmission.

Conclusions
The study results call for the need of continuous education on safer sex among HIV/AIDS women to empower them to discuss with their partners alternative options of exercising their sexuality and to raise awareness on their contraceptive choices in a way to protect their own health, their partner's and even their unborn offspring's health.

INTRODUCTION

From 1980 to 2001, of 222,356 HIV cases reported in Brazil, 59,624 were women[9] and the faster growing number of heterosexual contact as a transmission route has mostly contributed to the feminization of the HIV/AIDS epidemic.[9] Perinatal transmission is a dramatic outcome of women being affected by HIV/AIDS.

Biological, cultural, and socioeconomic factors have contributed to the increasing incidence and prevalence of HIV infection among women. Thus, in several societies, women often do not have an active

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A study by the Department of Tropical Diseases and Imaging of Faculdade de Medicina de Botucatu – Universidade Estadual Paulista (Unesp).
Based on the doctoral thesis presented to the Faculdade de Medicina de Botucatu (Unesp), 2002.
Received on 3/12/2002. Reviewed on 9/6/2003. Approved on 23/9/2003.

role on choosing how, when and in what conditions they will have sex.[7]

Knowledge of contraceptive methods and their use by Brazilian women has been widely discussed in recent years, from social aspects, such as inequality of rights, opportunities, and financial resources, to political issues since women's health programs have not been effectively implemented.[14] Moreover, to the authors' best knowledge, up to now the government's Women's Health Care Program has not offered any resourceful action for HIV women. Counseling during condom distribution campaigns focus mostly on condom use as preventive against STD/AIDS transmission rather than a targeted contraceptive method.

Ávila et al[1] noted that the World Health Organization, concerned over the increase in HIV-infected women at reproductive age worldwide, has advised researchers on the need for studies on contraception and HIV.

The call from health authorities, the steady increase in HIV cases among Brazilian women, mostly at reproductive age, allied to the effort of providing information to better advise HIV/AIDS women on health prompted the investigation on the use of contraceptive and HIV transmission prevention methods.

METHODS

An exploratory study was carried out in an outpatient clinic of a public university hospital, a reference HIV/AIDS center located in the mid-southern area of the state of São Paulo. The service also provides care and counseling on prevention to non-infected partners of HIV-infected patients.

As a patient attending this service usually comes for follow-up visits on average every 3 months, a 5-month- study period was established, from December 2000 to April 2001, which allowed enough time for patients to reschedule missed appointments.

Of a total of 83 patients who attended the outpatient clinic during the study period, 73 HIV-infected women participated in the study. Exclusion criteria were as follows: HIV-negative women, partners of HIV-infected male patients followed up in the clinic, and those who missed their appointments during the study period. Selection criteria were: female, confirmed HIV infection, 18 years old or older, outpatient follow-up for at least 4 months, and consent to participate in the study. All patients agreed to take part in the study.

Individual interviews were used for data collection and were carried out in a separate room by a trained researcher who filled out a questionnaire with open and close questions. The data collection tool was divided into two sections: section one was designed for collecting sociodemographic data on the patients, and section two had two questions, one exploring the contraceptive method currently used ("What do you do to avoid getting pregnant?"), and the other on their partner's HIV status ("What did your partner test in the HIV testing?").

The contraceptive method used question was also designed to indirectly assess the odds of HIV transmission given that some contraceptive methods work for both prevention and contraception.

Sociodemographic data underwent a quantitative analysis. Fischer's exact test with a 5% significance level was used in the analysis of variables contraceptive methods and marital status. The latter was divided into married and non-married.

Open questions underwent content analysis described by Bardin.[2] Answers were recorded literally in the questionnaire by the research interviewer and the following steps were taken during content analysis: 1) All information was obtained from the answers as a way to get indicators on contraceptive methods used and partner's HIV status; 2) All answers were compiled and classified according to common features or relationship clusters, generating categories related to the reported contraceptive methods adequacy or inadequacy; 3) Answers were classified into two categories: adequate and inadequate contraceptive methods. Answers reporting methods effective to prevent both pregnancy and HIV transmission or reinfection were classified as adequate and those indicating contraceptive actions that were ineffective to prevent either HIV infection or pregnancy were classified as inadequate. The answer categorizations were evaluated by two separate evaluators who reached a consensus. Quantitative data analysis was carried out based on established categories.

The study protocol was approved by the Ethics Research Committee of the Botucatu Medical School. All patients were informed on study purposes and consented to participate in the study.

RESULTS

Table 1 shows sociodemographic data of 73 HIV-infected women participating in the study.

Of them, 71.3% were between 19 and 39 years old in the reproductive age group. Most (60.3%) were

Table 1 - HIV-infected women according to sociodemographic data, Botucatu, 2001. (N=73)

Sociodemographics	Patients	
	N	%
Age groups (years)*		
≤19	1	1.4
20-29	25	34.3
30-39	26	35.6
40-49	18	24.6
≥50	3	4.1
Schooling years		
1-4	13	17.8
5-8	37	50.7
9-11	14	19.2
≥12	9	12.3
Marital status		
Married/living with a partner	44	60.3
Separated	11	15.0
Widow	10	13.7
Single	8	11.0
Exposure category		
Heterosexual	68	93.2
Heterosexual + IV drug user	5	6.8
HIV-status of sexual partner **		
HIV-positive	34	54.9
HIV-negative	22	35.4
Not tested	6	9.7

*Minimum age =19 years old; Maximum age =56 years old;
**N=62, 11 patients reported not having sexual partners.

married or living with a partner, followed by separated, widows, and single women.

Schooling was analyzed as years spent at school, determined by the highest grade subjects achieved and successfully completed. Most women in the study (68.5%) had one to eight years of schooling.

Regarding HIV infection route, the vast majority (93.2%) were infected via heterosexual contact.

HIV status of the women's regular sexual partner were not drawn from medical reports but instead from information given by the women themselves. Of 62 reported having sexual partners, 34 (54.9%) were HIV-infected, 22 (35.4%) tested negative and six (9.7%) did not undergo HIV testing (Table 1).

Answers to the question "What do you do to avoid getting pregnant?" were nominated according to the contraceptive methods used and classified as adequate and inadequate methods (Table 2).

The following are examples of answers including methods classified as adequate:

"*... I don't want any more children. I have completely eliminated sex from my life*." [sexual abstinence];

"*... he always wraps up his doll ...*" [use of male condom];

"*... we alternate the condom use*." [use of either male or female condoms].

Answers that illustrate inadequate methods were as follows:

"*... I feel secure by taking the pill as he does not always use a condom.*" [irregular use of male condom and contraceptive pills];

"*... he takes it out before ...*" [interrupted intercourse];

"*... sometimes he uses a condom.*" [irregular use of male condom].

Among women studied, 63 (86.3%) reported using adequate methods to avoid pregnancy that were also protective against HIV transmission or reinfection; most (36; 49.3%) reported using male condoms and six (8.2%) using either male or female condoms. Sexual abstinence, considered to be totally safe for preventing pregnancy, and HIV transmission and reinfection was reported by 21 (28.8%) women.

Of those using inadequate methods, four (5.5%) reported irregular use of male condoms because of

Table 2 - HIV-infected women according to contraceptive method used, Botucatu, 2001.

Methods		Patients	
		N	%
Adequate methods*	Male condom (MC)	36	49.3
	Sexual abstinence	21	28.8
	MC and female condom	6	8.2
Subtotal		63	86.3
Inadequate methods**	MC irregular use	4	5.5
	MC irregular use and oral contraceptive***	2	2.7
	MC irregular use and tubal ligation	2	2.7
	Tubal ligation	1	1.4
	Interrupted intercourse	1	1.4
Subtotal		10	13.7
Total		73	100

*Adequate methods: both contraceptive and HIV preventive methods.
**Inadequate methods: HIV preventive methods but with no contraceptive effect.
***Oral contraceptives were considered as an inadequate method because of their reduced efficacy when taken concomitantly with antiretrovirals.

their partners' refusal; two (2.7%) reported sporadic use of male condoms along with contraceptive pills and two (2.7%) reported sporadic use of male condoms and having tubal ligation. One (1.4%) reported interrupted intercourse and another one (1.4%) reported having tubal ligation. The use of contraceptive pills was considered an inadequate method given that concomitant use of antiretrovirals reduces the efficacy of oral contraceptives (Table 2).[6]

Table 3 presents contraceptive methods used that also prevent HIV transmission as well as women's marital status during the study period. Most (86.3%) reported using adequate methods including 35 married women.

The answers distribution related to adequate and inadequate contraceptive methods between married and not married women (single, widow, and separated) showed a statistically significant difference (p=0.0376). Not married women used more adequate preventive and protective methods than the married ones (Table 3).

DISCUSSION

Increasing HIV infection cases is seen worldwide among 15 to 49 year old people.[15] At the same time, statistics show a growing number of cases in women. High HIV prevalence among women implies an increase in mother-to-child transmission and growing morbidity and mortality rates in children.[15]

Similar findings were seen in the present study where 71.3% of women aged 19 to 39 years. As it is also a stage of life where pregnancy is most likely, these women should get thorough counseling concerning adequate methods for contraception and prevention of HIV transmission.

The desire for maternity is also there among HIV-infected women;[11] however, assisted-reproductive technology is not yet available to most HIV-infected people in Brazil. Since HIV infection does not prevent women and men from desiring having children, this could be overcome by choosing to have a baby at the most appropriate time in the disease course when risk of HIV transmission is lower.

According to the Brazilian Ministry of Health, women infected earlier in life when they are most fertile bring about an increase of pregnant women who could infect their children[9]. A rise in the number of cases seen among pregnant women can be attributed to the recommended routine HIV testing in prenatal visits.

Most women in the present study were married and reported using adequate contraceptive methods that also protected them against HIV infection. The same was seen among not married women who often reported using adequate methods. However, more married women also reported using inadequate preventive methods to avoid pregnancy and HIV infection. This could be explained by the fact that as these women are in a more stable relationship and have a steady partner; they might have found it more difficult to negotiate with their partner the use of protective methods against reinfection that would work as contraception as well. Or else, as Paiva et al[11] pointed out, these women could have a concealed desire, not revealed by them in the study, of having children.

The study findings now raise the issue on how women can protect themselves against HIV transmission in their relationships. Living in distinctive "macho" cultures these women are not even able to negotiate condom use when they suspect their partner has extramarital affairs. In fact, four women in the study reported irregular use of male condom because their sex partners' refusal.

Beckerman[3] calls attention to the fact that before the advent of new therapeutic options HIV-infected patients had a shorter survival and there were few discordant couples. In the present study, i was found that 35.4% women had non-infected sexual partners.

A common dilemma experienced by HIV-positive women who have HIV-negative sex partners is whether to have or not children. They usually report feeling highly anxious because of the risk of infecting both their offspring and partner.

Studies on the sexuality of HIV-infected women show that, after being tested positive, they go through

Table 3 - Distribution of HIV-infected women according to contraceptive methods and marital status, Botucatu, 2001.

Contraceptive methods	Married		Not married*		p **
	N	%	N	%	
Adequate methods***	35	79.5	28	96.6	0.0376
Inadequate methods****	9	20.5	1	3.4	
Total	44	100	29	100	

* Not married = single, widow, separated.
** Fischer's exact test p= 0.0376.
*** Adequate methods (male condom, sexual abstinence, male plus female condom).
**** Inadequate methods (irregular use of male condom, irregular use of male condom plus oral contraceptives, male condom plus tubal ligation and interrupted intercourse).

a period of less sexual activity.[5,12] In the first year they report experiencing a "relationship crisis" and, thus remain sexually abstinent fearing to infect their partner and ashamed to tell them they are infected.[5]

Pereira[12] noted that while investigating the sexuality of HIV-infected women. After getting to know their positive status, women reported feeling embarrassed and tense to talk about it. These women came across a wide variety of feelings and, not being able to experience their sexuality as before, they feared and avoided having relationships, and some even abandoned sexual contact. As the disease forces them to undergo several changes to experience their sexuality, they rather ignore their sexual drive.

Sexual abstinence was a way of avoidance reported by 28.8% women in the study. It was most often seen in separated women, followed by single and widows. Married woman reported sexual abstinence less frequently.

Sexual abstinence is a totally safe practice that eliminates the risk of HIV transmission. However, as Grimberg[5] and Pereira[12] showed, it works as a diversion but does not express a true desire. A similar phenomenon could be seen in the present study. When prompted with the question "What do you do to avoid getting pregnant?", the women studied not only reported the method(s) used (adequate and inadequate methods) but also gave reasons for their choices. It showed that the option for sexual abstinence expressing women's fears of infecting their partner and offspring could not be understood as lack of sexual drive. For some of them, abstinence was an outcome of trauma they experienced having lost previous pregnancies due to intrauterine infection. Some were so traumatized that, anticipating their partner's irregular use of condom, they ensured contraception by taking contraceptive pills at the same time.

Brazilian studies from 1995 to 1999 show use rates of male condom among HIV-infected women ranging from 10% to 58.5%.[10,15]

Several studies indicate that male condoms are not used as a result of the partner's refusal for feeling uncomfortable or believing it would hamper their sexual pleasure and masculinity. Furthermore, they evidence women's failure to negotiate with their partner.[4,8] Santos[13] adds that condom is not easily introduced in a couple's relationship. Today the use of a female condom, reported by 8.2%, enables women to overcome their partner's refusal of protecting themselves. And it is emerging as a choice method that could benefit HIV-infected women preventing both pregnancy and HIV transmission.

Subjects in Nobre's[10] study claimed that, although health professionals have emphasized the need for condom use as a preventive measure, they were never showed how to use it correctly. Another study warns that physicians were not used to talk much with of HIV-infected women about condom use, safe sex, contraceptive use or any other issues related to their reproductive health.[13]

Oral contraceptive use among HIV-infected women, a method that prevents pregnancy but sexual partner infection, was uncommonly seen in the study sample. This could be partly because these women are well informed on the inefficacy of this contraceptive method as it interferes with antiretroviral drug activity. There is evidence of reduction of the efficacy of oral contraceptives from 18.0% up to 47.0%,[6] and women could get pregnant even on contraceptive use.

Santos et al[13] recommend sound counseling on contraceptive method choice and contraceptive use and reinforce the major role of health care team on the attention of HIV-infected patients.

In the present study, 13.7% reported using inadequate methods to avoid pregnancy that could work also to prevent HIV transmission. Most were married and only one was a widow. However, as for their male partners, six were HIV-negatives. Another study carried out in the city of São Paulo observed out that 41.5% of women reported irregular use of male condom regardless their partner's HIV status.[13]

There are no studies in the literature that convincingly approach the reasons why HIV-infected women would engage in risky behavior for either HIV reinfection or unintended pregnancy. A study investigating non-use of condoms by HIV-infected and non HIV-infected couples show that HIV-negative men reported not taking efficacious preventive measures against HIV infection because they did not believe their partners were infected and because they are "macho" men.[4]

Paiva et al[11] note, however, that wanting to have children a human legitimate desire either motivated by religious issues and to give life a meaning or as a gender issue, to build up a feminine or virile identity.

Researchers have found that prevention was not a concern for most women who got infected[4,13,15] An explanation for this behavior could rely on the fact that these women are mostly poor, ill-informed and have no negotiation power, which in a way comes close to the widespread idea of AIDS "*feminization, internalization, and depauperation*" among women.

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