

HIV Voluntary Counseling And Testing Of Pregnant Women In Primary Health Care Centres In Ilesa, Nigeria.

A Olanrewaju, F Ola, A Akintunde, B Ibrahim, F Ibiyemi

Citation

A Olanrewaju, F Ola, A Akintunde, B Ibrahim, F Ibiyemi. *HIV Voluntary Counseling And Testing Of Pregnant Women In Primary Health Care Centres In Ilesa, Nigeria.* The Internet Journal of Third World Medicine. 2006 Volume 6 Number 1.

Abstract

Aim: This study was carried to determine the prevalence of HIV and the acceptability of HIV voluntary counseling and testing (VCT) in pregnancy as a strategy for the prevention of mother to child transmission (PMTCT).

Methods: Group and individual pre and post-test counseling were performed by trained field workers. Screening for HIV infection was based on two sequential rapid HIV tests. Focus group discussion was also held among HIV positive pregnant women.

Results: 587 (80.6%) pregnant women underwent the test after pre-test counseling. Sixty-nine women (9.5%) had a positive result. The women were counseled on the need for prevention of mother to child transmission of HIV infection. Thirteen (18.8%) of the women accepted to utilize PMTCT facilities. Reasons cited for non-utilization of PMTCT facilities mainly bordered on the belief that they could not transmit HIV to their unborn children. Significant associations were found between HIV positivity and marital status, low educational status, low social class and high parity of the study subjects.

Conclusion: The study suggests that a successful integration of VCT into the existing primary health care services is feasible in developing countries like Nigeria, though; there is a need to create more awareness on the effectiveness of PMTCT.

INTRODUCTION

It has been well established that mother to child transmission accounts for the majority of HIV infections in children in developing countries.¹ The rate of transmission from an untreated HIV positive pregnant woman to her newborn is high.^{2,3} However, tremendous medical and public health achievements have been made in the prevention of mother-to-child transmission (PMTCT) of HIV.⁴ The risk for infant infection has been reduced from approximately 25% to less than 2% by the use of currently recommended prenatal ARV and obstetric interventions for a woman who is aware of her HIV infection in pregnancy.⁴ Ideally, all women should be screened for HIV before delivery, during an initial prenatal care visit so that potent combination antiretroviral treatment can be given to women who are HIV-infected. However, approximately 40% of the mothers of the estimated HIV infected infants born in the year 2000 were not screened for HIV infection before delivery.⁴ Globally, HIV testing and counseling is recognized as a priority in national HIV programmes because it forms the gateway to HIV/AIDS prevention, care, treatment and support interventions but this has not become entrenched in peripheral health facilities in

developing countries.⁵ It is critical to increase the prenatal detection rate of HIV-infected pregnant women in these countries, so that effective interventions can be delivered.

Furthermore, the availability of affordable, accurate, reliable, simple and rapid HIV tests providing results within the time frame of a single brief antenatal visit for single or a small number of clients significantly facilitates PMTCT programmes by reducing traveling time and expenses, and by virtue of their feasibility in peripheral primary health services.⁴ The sensitivity and specificity of these tests are greater than or equal to 99% and similar to those of ELISA.⁴ The rapid HIV tests are most suitable in developing countries where the majority of pregnant women are attended by traditional birth attendants (TBAs), the pregnant women use the formal health sector only as a backup arrangement.^{6,7} If pregnancy and labour progress as expected, the pregnant woman attends a local formal health post once at booking which mostly may be late in pregnancy. In these circumstances, rapid HIV tests afford the opportunity to screen for HIV in women attending peripheral units and provide results during same visit.^{8,9}

The present study sets out to determine the prevalence of HIV seropositivity among pregnant women attending primary health services and factors influencing utilization of PMTCT services in Ilesa Local Government maternity centres in South Western Nigeria.

METHODS

SUBJECTS

A total of 728 pregnant women attending maternity centres in four primary health facilities in Ilesa East and West Local Government Areas of Osun State in Nigeria were serially recruited over a six week period for the study. Group counseling sessions were held at the beginning of antenatal clinic activities. Each of the women later had individual pre-test counseling and 518 pregnant women gave consent to undergo HIV testing.

ETHICAL CONSIDERATIONS

Informed written consent was obtained from each participant after pre-test counseling.

Post-test counseling was held for each subject. The Health Department of the Local Government authorities approved the study protocol.

TESTING PROCEDURE

Two milliliters of venous blood were collected in heparinized bottle from each of the consenting participants by the first author. This was subjected to analysis using the HIV capillus rapid test, a direct latex agglutination assay, following the WHO testing recommendations¹. Standard operating procedures were followed. Rapid test kits were kept under optimal conditions and used before the expiry date. Results were read under good illumination. Test quality was ascertained by running regular negative and positive control tests. The results were obtained in five to ten minutes. The HIV Capillus rapid test kit was previously evaluated by the WHO and found to have high sensitivity, specificity and predictive values (100%, 98% and $\geq 96\%$ respectively) and was as accurate as the immunoblot InnoLIA HIV confirmation (Innogenetics).^{1,24} Samples which gave positive results were re-analyzed using the Determine HIV 1/2 assay. Post-test counseling was held for each of the women. Participants with positive results were recruited into the existing PMTCT programme of Living Hope Care, Ilesa, a non-governmental organization that provides comprehensive care and support for people living with HIV/AIDS, people affected by AIDS as well as orphans

and vulnerable children. Data on socio-demographic characteristics and obstetric history were obtained from the women. The subjects were categorized into social class using Oyedemi classification of socioeconomic status.¹⁰ Standard biosafety, record keeping and client confidentiality procedures were observed.

Two focus group discussions were held among HIV positive pregnant women to elicit information on the acceptability of PMTCT facilities. The first author served as the facilitator.

STATISTICAL ANALYSIS

The statistical package for the social sciences (SPSS) version 11 was employed for the data analysis. Results were presented in percentages, means, standard deviations and diagram. Simple inferential statistics were employed. $p < 0.05$ was taken as statistically significant. Qualitative data gathered from focus group discussions were analyzed through detailed content analysis and ethnographic summary. This involved verbatim quoting of respondents to buttress certain arguments raised in the course of the discussion.

RESULTS

A total of 518 pregnant women were tested for HIV infection. Table 1 shows the socio-demographic characteristics. The ages of subjects ranged from 15 to 40 years with a mean age of 25.99 ± 4.98 years. Majority, 298 (50.8%) were in the age group of 25 - 34 years. Four hundred and seventy three subjects (80.6%) were currently married, 344

(58.6%) had secondary education and as many as 449 (76.5%) were in the low socio -

economic class. Sixty-nine women (9.5%) had positive results to the double rapid tests. There was no discordant result. Thirteen (18.8%) of the women accepted to utilize PMTCT facilities.

At the focus group discussion, the women expressed their mind on the possibility of transmitting HIV to the unborn child despite their status.

One of them submitted that:

'Me, it is impossible. I reject it in Jesus name! I don't have HIV and I can not give it my child. I am sure this HIV thing is not as bad as you people are making us to believe'

One of the women who accepted to use PMTCT services

hinged her decision on the provision of the facilities at no cost. Said she:

'As long as the service will be provided free, I will make use of it. This is because my husband can not afford to pay for extra service. Even, it was a tug-of-war before I could collect the transport fare to the clinic this morning'

Figure 1

Table 1: Socio-demographic characteristics of the pregnant women

Characteristics	HIV positive n= 69 (%)	HIV negative n= 518 (%)	Statistical test / p value
Age group			
15-24 years	18(26.1)	209(40.3)	$\chi^2 = 5.23$, df=2, p=0.073
25-34 years	42 (60.9)	256(49.4)	
>35 years	9 (13.0)	53 (10.3)	
Marital status			
Single	21(30.4)	93(18.0)	$\chi^2 = 6.061$, df=1, p=0.014
Married	48(69.6)	425(82.0)	
Educational attainment			
No secondary school education	49(71.0)	194(37.4)	$\chi^2 = 28.27$, df=1, p<0.001
Had secondary education	20(29.0)	324(62.6)	
Occupation			
Unemployed	39(56.5)	200(38.6)	$\chi^2 = 8.093$, df=1, p=0.004
Employed	30(43.5)	318(61.4)	
Social class			
High	8(11.6)	20(3.9)	$\chi^2 = 8.451$, df=2, p=0.015
Middle	14(20.3)	96(18.5)	
Low	47(68.1)	402(77.6)	
Gravidity			
Primipara	12(17.4)	40(7.7)	$\chi^2 = 10.604$, df=2 p=0.005
Multipara	25(36.2)	148(28.6)	
Grandmultipara	32(46.4)	330(63.7)	
Gestational age			
1 st trimester	17(24.6)	100(19.3)	$\chi^2 = 1.089$, df=2 p=0.580
2 nd trimester	24(34.8)	195(37.6)	
3 rd trimester	28(40.6)	223(43.1)	

DISCUSSION

The prevalence of HIV of 9.5 % obtained in this study is much higher than the prevalence rate of 1.2% reported for Osun State (where the study sites are located) and the national prevalence of 4.4% in the 2005 sentinel survey conducted by the Nigeria's National Agency for AIDS Control.¹¹ The difference may be explained by the fact that the sentinel survey made use of pregnant women in tertiary health centres whereas our study focused on women accessing ante-natal care (ANC) in primary health facilities. Previous studies have reported low ANC uptake in tertiary centres while many pregnant women in Nigeria attend peripheral health facilities.^{6,7}

Our study supports the documented fact that the prevalence of HIV is high in the reproductive age group during which sexual activity is maximal. It also agrees with an earlier finding that young adults, especially females are at the centre of the epidemic in Nigeria.⁵

Marital status was found to have significant association with HIV status of the study participants. This is in keeping with study reported by Hope et al.¹² It was demonstrated in the study that women married to spouses whose jobs take them away from homes for long periods tend to engage in unsafe sex, thereby predisposing them HIV infection. Furthermore, traditional gender roles often promote sexual practices that put women at risk of contracting HIV even in a stable relationship. In Nigerian patriarchal society, women especially of the lower social class, can not influence their husbands' behaviour and have limited ability to negotiate safe sex.¹¹

This study also shows that HIV infection is more common among pregnant women who did not go to school or complete secondary school education. This agrees with study that reported that women with higher education have better knowledge of HIV transmission whereas low level of female education promotes ignorance about HIV transmission and its prevention, especially to the unborn child.¹³ This was aptly demonstrated in the focus group discussion. Most of the women were in school when they had the index pregnancy and therefore could not complete secondary education. This may also explain why most of them were unemployed and they belonged to low socio-economic class. Unemployment is associated with poverty, and this has been linked with unsafe sex for money thereby increasing the risk of HIV infection.^{13,14}

We also found that majority of those that attended the maternity centres were multigravida, while primigravida who might be at a higher risk of HIV infection by virtue of relatively younger age and the associated risky sexual behaviours, do not utilize formal antenatal services . Furthermore, those that utilized the services presented late in third trimester, when interventions could be late to address some adverse trends of HIV on pregnancy especially in resource limited settings. Financial constraint was cited as reasons for late and/or poor utilization of antenatal services. This is in agreement with other studies.^{15, 16}

The acceptance rate of VCT was high among the subjects but utilization of PMTCT was remarkably low. Ekanem et al¹⁵ reported similar findings in Ibadan while de Paoli and co-workers¹⁷ reported that perceived high personal susceptibility to HIV/AIDS, barriers related to confidentiality and partner involvement were associated with willingness to accept VCT. The women's acceptance of VCT seems to depend upon their perception that VCT and

PMTCT strategies provide clear benefits, primarily for them and not for the unborn child. This is influenced by a set of social and psychological factors which determine the health-seeking behaviour of the women.

CONCLUSION

In this study, the acceptance rate for VCT was high among the pregnant women attending maternity centres in Ilesa, Nigeria; the uptake of PMTCT strategies was remarkably low. There is a need to develop innovative information and health education techniques to provide HIV positive mothers with knowledge and skills that will enable them to make informed choices about PMTCT strategies.

References

1. World Health Organization, Centers for Disease Control and Prevention, Association of Public Health Laboratories. Guidelines for appropriate evaluations of HIV testing technologies in Africa. Atlanta: Centers for Disease Control and Prevention; 2003
2. Adjorlolo-Johnson G, De Cock KM, Ekpini E, Vetter KM, Sibailly T, Brattegaard K, Yavo D, Doorly R, Whitaker JP, Kestens L, et al. Prospective comparison of mother-to-child transmission of HIV-1 and HIV-2 in Abidjan, Ivory Coast. *JAMA*. 1994; 272(6):487-8
3. O'Donovan D, Ariyoshi K, Milligan P, Ota M, Yamuah L, Sarge-Njie R, Whittle H. Maternal plasma viral RNA levels determine marked differences in mother-to-child transmission rates of HIV-1 and HIV-2 in The Gambia. MRC/Gambia Government/University College London Medical School working group on mother-child transmission of HIV/AIDS. 2002; 14 (4): 441-8.
4. Centers for Disease Control and Prevention. HIV prevention strategic plan through 2005. Available from: URL: [http:// www.cdc.gov/hiv/pubs/prev-strat-plan.pdf](http://www.cdc.gov/hiv/pubs/prev-strat-plan.pdf) . Accessed on January 12, 2006.
5. UNAIDS. HIV voluntary counselling and testing: a gateway to prevention and care. NAIDS Best Practice Collection. Geneva: UNAIDS; 2002 (UNAIDS/02.41E).
6. Abioye-Kuteyi EA, Elias O, Familusi AA, Fakunle A and Akinfolayan K. A descriptive study of the training, practice and utilisation of Traditional Birth Attendants in Atakumosa West Local Government area of Nigeria. *The Journal of the Royal Society for the Promotion of Health*. 2001;121(2): 119-124.
7. Fatusi, AO and Abioye-Kuteyi, EA. Defining the Traditional Birth Attendants: What we know about them in Nigeria. Report of the workshop conducted by the Women's Health and Action Research Centre. 1997 pp. 18-26
8. Kassler WJ, Alwano-Edyegu MG, Marum E, Biryahwaho B, Kataaha P, Dillon B. Rapid HIV testing with same-day results: a field trial in Uganda. *International Journal of STD and AIDS*. 1998; 9 (3):134-8.
9. Plourde PJ, Mphuka S, Muyinda GK, Banda M, Sichali-Sichinga K, Chama D, Ronald AR. Accuracy and costs of rapid human immunodeficiency virus testing technologies in rural hospitals in Zambia. *Sexually Transmitted Disease*. 1998; 25(5):254-9.
10. Oyedele GA. Socioeconomic and cultural background of hospitalized children in Ilesha. *Nigerian Journal of Paediatrics*. 1985 ;12 (4):111-117.
11. Nigeria: HIV/AIDS Country Report 2005. National Action Committee on AIDS
12. Hope KR. Mobile workers and HIW/AIDS in Botswana. *AIDS Analysis Africa* 2002;10:6-7
13. Kayode CM, Adeyemo AA, Omotade OO. Beliefs and perceptions about HIV infections and AIDS among mothers of infants in Ibadan, Nigeria. *West African Journal of Medicine* 2002 ; 21:43-47.
14. Adejuyigbe EA, Fasubaa OB, Onayade AA. Sociodemographic characteristics of HIV- positive mother-child pairs in Ile-Ife, Nigeria. *AIDS Care*. 2004;16(3): 275-282
15. Ekanem EE, Gbadegesin A. Voluntary Counseling and Testing (VCT) for Human Immunodeficiency Virus: a study on acceptability by Nigerian women attending antenatal clinics. *African Journal of Reproductive Health*. 2004; 8(2): 91-100.
16. Iliyasu Z, Kabir M, Galadanci HS, Abubakar IS, Aliyu MH. Awareness and attitude of antenatal clients towards HIV voluntary counselling and testing in Aminu Kano Teaching Hospital, Kano, Nigeria. *Nigerian Journal of Medicine*. 2005 ;14 (1): 27-32.
17. de Paoli MM, Manongi R, Klepp KI. Factors influencing acceptability of voluntary counseling and HIV-testing among pregnant women in Northern Tanzania . *AIDS Care*. 2004; 16(4):411-25.

Author Information

Afolabi Muhammed Olanrewaju, MB;BS ,MPH, FWACP

Department of Family Medicine, Ladoke Akintola University Teaching Hospital

Fatusi Adesegun Ola, MBChB, MPH, FWACP, FRIPH

Department of Community Health, Obafemi Awolowo University

Abioye-Kuteyi E. Akintunde, MB; BS, FMCGP, FWACP, FRACGP

Department of General Medical Practice, Obafemi Awolowo University Teaching Hospital Complex

Bello Ibrahim, MB;BS, FMCGP

Department of General Medical Practice, Obafemi Awolowo University Teaching Hospital Complex

Fakande Ibiyemi, RN, RM, PHN

Living Hope Care for PLWHA Society