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Sero-prevalence of HIV-1 among commercial motorcyclist (okada riders) in Abuja.

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Abstract

Africa remains the global epicentre of the AIDS pandemic and many Africa countries are experiencing generalized epidemics. This means that HIV is spreading throughout the general population, rather than being confined to populations at higher risk. Three hundred and seventy nine commercial motorcyclists (Okada riders) whose age range from 16 and 50 years (mean 33 years) were randomly recruited and tested for HIV-1 antibody. They were counselled and all consented to participate in the study. 5ml blood was collected into EDTA vacutainers and plasma was separated and tested for HIV antibody. Out of 379 samples tested 32 (8.7%) were HIV-1 antibody positive. The prevalence of HIV-1 among Okada riders in Abuja was statistically significantly at 99% significant level ($P<0.01$) and degree of freedom (n-1). This study has shown that there are sub-epidemics of HIV infection in Abuja and people with high risk behaviours may be fanning the epidemics. Therefore, good and effective control measures must be put in place.

Key Words: Sero-prevalence, HIV/AIDS, High risk, Surveillance.

Introduction

The AIDS epidemic is a global crisis with impacts that will be felt for decades to come. More than 28 million people have died since the first case was reported in 1981 (6). In 2005, AIDS killed 2.8 million people, and an estimated 4.1 million became infected, bringing to 38.6 million the number of people living with the virus around the world; 24.5 million of these people are in Sub-Saharan Africa and 8.3 million live in Asia (7, 16). The numbers of people living with HIV continue to rise, despite the fact that effective preventive strategies exist (2). While the data on HIV have been more accurate than on many infectious diseases, there are those who would argue that UNAIDS and WHO have some times underestimated the

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epidemic, and all other times inflated the HIV numbers (11, 14). The three most commonly used sources of data are sentinel surveillance systems that undertake periodic surveys among specific population groups; national population based surveys; and case reports from health facilities (2, 3).

Surveillance based on specific risk behaviour has been poorly developed, though it has been speculated that such surveys can be of importance in planning quick interventions to reduce the rate of transmission through such behaviour practice (2, 5). For example in Asian countries such as Thailand and Cambodia, which have chosen to tackle openly high risk behaviour, such as sex workers, have been more successful in fighting HIV, as shown by the reduction in infection rates among sex workers (11).

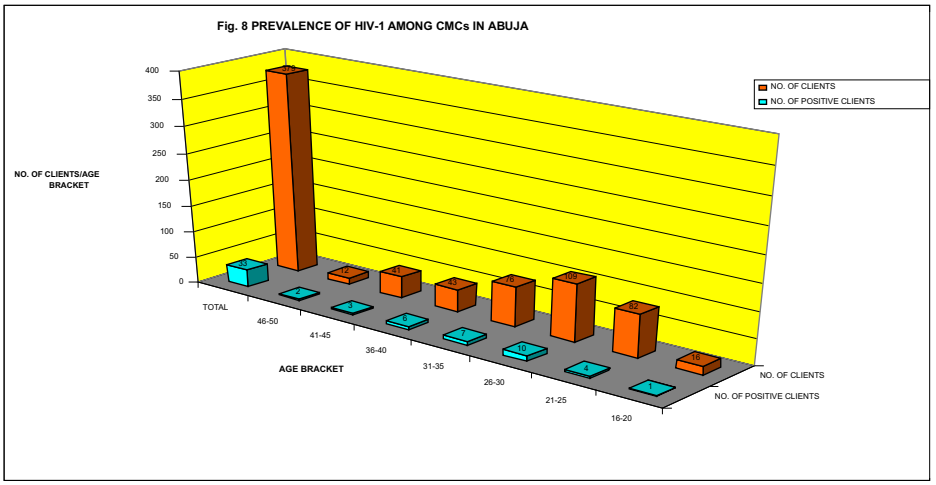
Understanding the prevalence and patterns of HIV infection and risk behaviours is important for every country no matter the stage of the epidemic or the level of HIV prevalence. Accurate measurement of HIV prevalence among the general population as well as among specific sub-groups who are at high risk of HIV infection is crucial for planning prevention interventions and for providing health care for those who are infected (4, 10, and 12). It is in this perception that the survey of HIV-1 among commercial motorcyclists (Okada riders) was intended.

Materials and method

Three hundred and seventy nine (379) commercial motorcyclists (Okada riders) were randomly recruited and screened for HIV antibody. They were counselled and all consented to participate in the study. 5ml blood were collected into EDTA vacutainers and transported to the Virology laboratory of the Department of Microbiology, Human Virology and Biotechnology of the National Institute for Pharmaceutical Research and Development in Abuja. The plasma was separated and stored at -40^{o}C freezer until tested. Test for HIV antibody was carried out using UniGold HIV test kit and Serocard HIV-1/2 also (Trinity Biotech plc, Bray Business Park, Bray co., Wicklow, Ireland) according to the manufacturer's instruction. All the samples were tested using the two kits and those found reactive to HIV-1 antibody were re-tested.

Result

Out of the three hundred and seventy nine (379) motorcyclists that were tested for HIV antibody, the age range from 16 and 50 years (mean 33 years) thirty two (8.7%) were HIV-1 antibody positive.



The prevalence of HIV1 among commercial motorcyclists (Okada riders) in Abuja was statistically significant at 99% confidence level and degree of freedom (n-1).

Discussion

HIV/AIDS epidemic has already devastated Nigeria with nearly a million people dead and more than million orphaned (8). By the end of 2003, the virus had infected approximately 5% of the adult population estimated at about four to six million people. HIV prevalence among pregnant women range between 2.3% in Southwest region to 7% in North central region (6), in 2005, about 2.9 million (4.4%) adults are carrying HIV in Nigeria which made Nigeria the third country with HIV burden after India and South Africa.

HIV prevalence and surveys on sexual behaviours are of uneven quality and could be improved in several ways to provide more reliable and detailed information on trends and to provide better documentation of changes and differences within and between regions, and within and between population sub-groups (5, 9). Data on sexual behaviours of men in general, youth and other specific groups at high risk for HIV are still insufficient (4). The only available data on transporters as high risk group vulnerable to HIV infection in Nigeria is on long journey drivers where about four different researches are documented (2). A prevalence of about 1.6% in 1991 and 4% in 1994 and one local study shows prevalence of 4.9% before 1992 (2). In this study out of 379 commercial motorcyclists (Okada Riders) recruited for this study, 32 (8.7%) were positive to HIV-1 antibody. In another study in 2004 by Onoja

et al, 100 commercial motorcyclists were recruited for a study in Abuja 14 (14%) were tested positive to HIV-1 antibody. In this same study 269 commercial sex workers were tested for the presence of HIV-1 antibody, and 164 (60.96%) were positive (8).

Conclusion

This study has however shown that there are local sub-epidemics of HIV infection in Abuja. It has also shown that people with high risk behaviours are potential source of transmission, and there is need for a good and effective control measures. Therefore for a good and effective control measures, advocacy and enlightment programs aimed at educating these groups must be put in place by government and non-governmental organizations. If already in place, strategy for implementation must be spread and intensify to capture a good number of these groups.

References

1. Abdulsalami N and Tekena OH., (2006): The epidemiology of HIV/AIDS in Nigeria, AIDS in Nigeria; A nation on the threshold, Harvard series on population and International Health. Pp17-20.
2. Christine P, Vanessa W, Sushela S, Jacqueline ED, Akinrinola B., (2002): Issues in measuring HIV prevalence: The case of Nigeria. African journal of Reproductive Health, 6:3, 11-29.
3. Cyril P, John S, Elizabeth P, Tim B, Ruben M, Owen M, Mohammed S, Lu F, Peter D., (2005): Using HIV surveillance data; recent experiences and avenues for the future. AIDS, 19 (Suppl 2): S53-S58.
4. David OO, Tekena OH, Gerogina NO, (2006): Seroepidemiology. AIDS in Nigeria, A nation on the threshold, Harvard series on population andInternational Health p 58.
5. Fawole OI, Asuzu MC, and Oduntan SO, (1999); Survey of knowledge, attitudes and sexual practices relating to HIV infection/AIDS among Nigerian secondary School students. African journal of reproductive health, 3, 2: 15-24.
6. HIV/AIDS and work; global estimates, impact and response (2004):Tthe International Labour Programme on HIV/AIDS and the world of work. http//www.hiv/aids and work.org Pp x11, 4
7. Karl-Heinz H, Martina G, Sucheep P, Doreen M, Miguel AA, Oliver H, Leonard M, Deborah LB, Donan M, France EM, Michael H, (2006); Frequency of HIV type 1 dual infection and HIV diversity: Analysis of low and high-risk populations in Mbenya region, Tanzania. AIDS research and human retroviruses, 22, 7: 599-606.
8. Onoja A.J, Shehu M.B., Abu A, Odama L, Inyang U.S., Nasidi A (2004): Baseline HIV-1 prevalence among various risk groups in Nigeria: xv International AIDS conference Bangkok, Book of absract 11-16th July 2004 pp 116.
9. Phyllis, J.K. and Olusoji A (2006): Special challenge for Nigeria in tackling epidemic. AIDS in Nigeria, A nation on the threshold; Harvard series on population and International Health p10.
10. Report on evaluation of a National AIDS programme; A methods package 1, (1994): WHO/GPA report. section 1 pp1-7, section 3 pp 1-9
11. Report on the global AIDS Epidemics (2004): UNAIDS

Website http://www.unaids.org pp 13-16 and 23.

12. Report on regional consensus on improved behavioural and sero-surveillance for HIV (1998): Report from a regional conference in East Africa. UNAIDS website: http://www.unaids.org p8.
13. Report on the global AIDS epidemic, (2006); Global epidemics today; AUNAIDS 10th anniversary special edition. Pp6-8
14. Seema TM, Akinyemi O, David OO, (2006): The molecular epidemiology of HIV. AIDS in Nigeria: A Nation on the threshold, Harvard Series on Population and International Health, Pp 67-83.
15. Stephen Mc Nally, (2003): Prevalence and treatment of HIV/AIDS. AIDS society for Asia and the pacific. pp 3-6.
16. Stuart Gllepsie, (2006): AIDS poverty and hunger ; an overview.AIDS Hunger and Poverty; Challenges and Responses, highlights of the international conference on HIV/AIDS and food security Durban South Africa April 14-16, 2005. Pp1-4.