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Pattern of retroviral screening among dental surgeons in Nigeria

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ABSTRACT: Objective: To assess the prevalence, frequency and reasons for retroviral screening among Nigerian dental surgeons. **Methods:** This descriptive cross-sectional survey was conducted in southern and northern, Nigeria. The study population was 300 actively practicing dental surgeons recruited using multistage sampling technique. The data collection tool utilized was a self-administered questionnaire. **Results:** There were more males (67.7%) than females (32.3%) giving a male: female ratio of 2.1:1, with a mean age of 34.1 ± 6.5 years. Majority (79.0%) of the respondents had undergone retroviral screening. Out of which 42.9% and 35.5% have done the testing once and twice respectively. Routine medical examination and pre-employment screening were the major reasons for last retroviral screening among the respondents. More than half (59.9%) of the respondents supported pre-employment retroviral screening of dental surgeons while only 41.6% supported routine retroviral screening for all dental patients. Prevention of cross infection and medico-legal reasons were the major reasons for supporting routine retroviral screening for all dental patients. **Conclusion:** Data from this study revealed that a significant proportion of active practicing Nigerian dental surgeons have undergone retroviral screening. This qualifies them as role models in terms of retroviral testing. To further increase the acceptance and practice of retroviral screening among dental surgeons, necessary information on barriers among unscreened group would be an obvious necessity, so such a survey is therefore advocated.

Keywords: Dental surgeons, HIV, Retroviral screening

Introduction

Human Immunodeficiency Virus (HIV), a retrovirus was isolated and identified as the causative agent of Acquired Immunodeficiency Syndrome (AIDS) by a group of French scientists led by Dr. Luc Montagnier of the Pasteur Institute in Paris and a group of American scientists led Dr. Robert Gallo of the National Cancer Institute in Washington in 1983^{1,2}. The mortality and negative impact of HIV in all sectors of human endeavour qualifies it, as an overwhelming epidemic in the history of mankind³⁻⁶. The advent of highly active antiretroviral drug has resulted in reduced mortality and morbidity and attendant increased survival rate of HIV infected individual^{7,8}. The cycle of care for HIV infected individual usually begins with HIV testing and a diagnosis of HIV infection⁹. HIV testing therefore stands out as a critical entry point to the full spectrum of life-sustaining care and treatment for people living with HIV⁹.

Detection of HIV antibodies in blood is the one of the most popular test utilized in determining whether or not an individual is infected with the HIV. The first, most appropriate, inexpensive and very accurate blood HIV antibody test for routine diagnosis of HIV among adults, the enzyme-linked immunoabsorbent antibody test became available in 1985^{10,11}. HIV testing play a role in prevention as well, reducing stigma and identifying important target groups for prevention messages. Limited accessibility and low uptake of HIV testing evidently exists in individuals living in resource-poor settings as fewer than 10% of their population know their HIV status^{12,13}.

Health care workers in direct exposure to blood at workplace are among the group at risk for HIV and are expected to undergo HIV testing. The benefit of HIV status of health worker is in defining their work schedule especially restricted HIV infected health worker to non blood and blood fluid contact fields cannot be overemphasized. Pre-employment HIV screening result may also serve as a veritable tool for workmen compensation claims for the health worker. From Sociological view, health workers undergoing routine HIV testing will motivate the general public to do same because health workers are viewed as role model in any society, they reside in.

In the field of dentistry which has a lot of exposure prone procedure, retroviral screening for dental surgeons is not only important for the welfare of dental care recipients but also for the benefit of the dentist. It will serve dual purpose of protecting dental care recipient by preventing transmission of HIV from dentist to patient and early entry into antiretroviral treatment with attendant slower health deterioration, increased longevity, improved quality of life and increased overall prognosis. The use of antiretroviral therapy is would be the best prospect for prolonged health in infected dentist as well as reducing possible dentist-patient transmission.

Studies have revealed a lot of factors that inhibit uptake of HIV testing in developing countries. The documented factors include fear of stigma, anxiety about the result, fear of learning one's status, fear of receiving an HIV-positive status, fear of having to change sexual practices with a positive HIV test, psychological trauma, lack of perceived HIV risk, lack of confidentiality, marital disharmony, long distances to Voluntary Counselling and Testing (VCT) sites, time constraints, long delays in returning HIV test results limit people's access to traditional VCT systems infringement on fundamental human rights, fear of living with positive screening, stigmatization, victimization at place of work if positive, incurable nature of the disease and cost of treatment¹²⁻¹⁷.

In Southeast Nigeria, the commonest reason for being unwilling to undergo HIV test given by polytechnic undergraduate students was that they were certain they were not infected¹⁸. Fear of the consequences of testing positive -mainly worries related to discrimination and rejection - also hinders HIV testing¹⁹. Reasons for declining HIV testing among Mexican women were based on their belief of their husband faithfulness and also need for husband's permission²⁰. The increasing number of HIV-infected patients worldwide and high percutaneous and mucocutaneous in dental practice makes the pattern of retroviral screening among dental surgeons a valuable research question waiting for answer.

The objective of the study was to assess the prevalence, frequency and reasons for retroviral screening among Nigerian dental surgeons.

Materials and Methods

This descriptive cross-sectional survey was conducted in southern and northern, Nigeria. The study population was 300 actively practicing dental surgeons recruited using proportional multistage sampling technique. The data collection tool utilized was a self-administered questionnaire. The distribution of questionnaire involved both hand and postal delivery. The measures assessed were prevalence, frequency and reasons for the last retroviral screening. The attitude to pre-employment screening for all dental surgeons and routine screening for all dental patients with reasons were also assessed. Informed consent was obtained from participants. Data analysis was done with SPSS version 15.0. The results were presented in both graphic and tabular form.

Results

There were more males (67.7%) than females (32.3%) giving a male: female ratio of 2.1:1, with a mean age of 34.1 ± 6.5 years (**Table 1**). Majority (79.0%) of the respondents have undergone retroviral screening. Out of which

42.9% and 35.5% have done the testing once and twice respectively (**Figure 1**). Routine medical examination and pre-employment were the major reasons for last retroviral screening among the respondents (**Figure 2**). More than half (59.9%) of the respondents supported pre-employment retroviral screening of dentist while only 41.6% supported routine retroviral screening for all dental patients (**Table 2**). Prevention of cross infection and medico-legal reasons were the major reasons for supporting routine retroviral screening for all dental patients (**Figure 3**).

TABLE 1: AGE AND SEX DISTRIBUTION OF THE RESPONDENTS

Age Range	Gender				Total	%
	Male	%	Female	%		
21 – 30	55	64.7	30	35.3	85	33.1
31 – 40	94	69.6	41	30.5	135	52.5
41 – 50	22	71.0	9	29.0	31	12.1
> 50	3	50.0	3	50.0	6	2.3
Total	174	67.7	83	32.3	257	100

TABLE 2: RESPONDENTS THAT SUPPORTED PRE-EMPLOYMENT RETROVIRAL SCREENING FOR ALL DENTAL SURGEONS AND ALL DENTAL PATIENTS (N=257).

Question	Yes	No	No Response
Do you support pre-employment retroviral screening for all dental surgeons?	154(59.9)	94(36.6)	9 (3.5)
Do you support routine retroviral screening for all dental patients?	107(41.6)	149(58.0)	1(0.4)

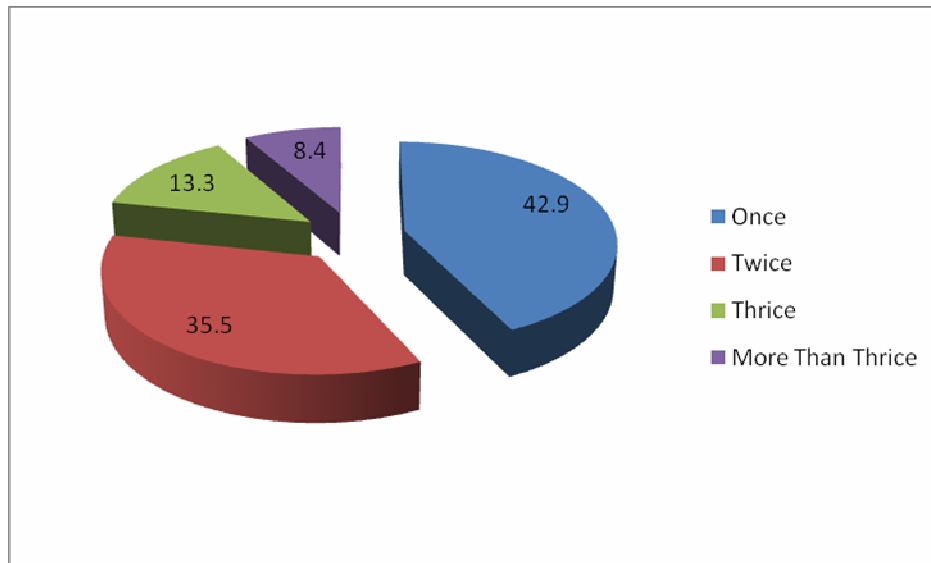


FIGURE 1: FREQUENCY OF RETROVIRAL SCREENING AMONG RESPONDENTS (N=203)

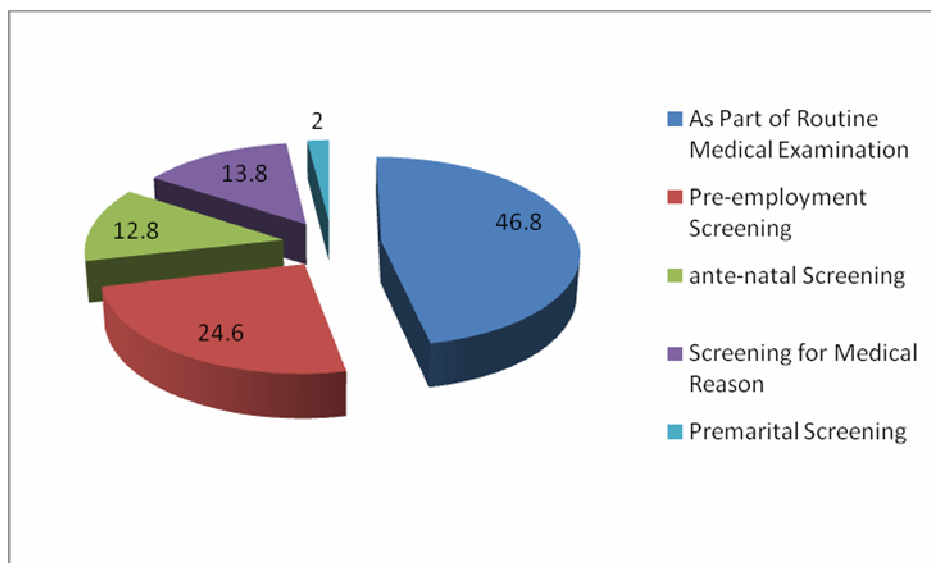


FIGURE 2: REASONS FOR THE LAST RETROVIRAL SCREENING AMONG RESPONDENTS (N=203)

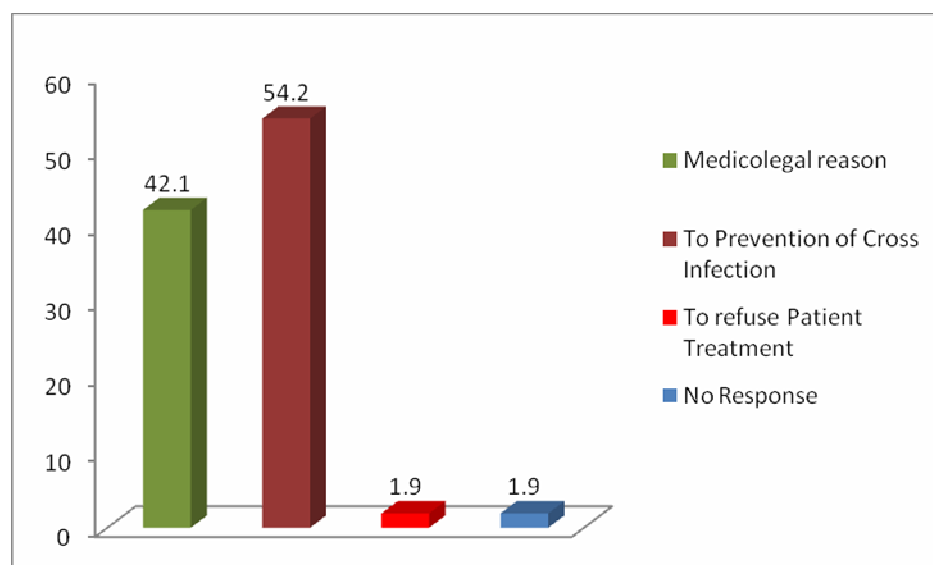


FIGURE 3: RESPONDENTS' REASONS FOR SUPPORTING RETROVIRAL SCREENING FOR ALL DENTAL PATIENTS (N=107)

Discussion

To the best knowledge of the researcher, this is the first study assessing the pattern of retroviral screening among dental surgeons in Nigeria. Majority (79.0%) of the respondents had undergone retroviral screening in this study which is comparable to the 67% documented among women attending family planning clinic in New York City¹⁵. This is a good and significant finding in this exposure prone field in developing country. This figure is higher than 11.5% recorded among youths in Sagamu, Nigeria¹⁶, 17.3% recorded among African university undergraduates recruited from Nigeria, South Africa, Uganda, and Zimbabwe²¹ and 26.4% recorded among polytechnics undergraduates in Nigeria¹⁸. It was also higher than 48% documented among adults from five districts in Botswana¹⁷ but lower than 85.2% documented among pregnant Mexican women²⁰. Perception of more benefits from testing is the source of motivation for individuals to seek and undergo HIV testing^{19,22}. Efforts to increase the number of screened dental surgeon would be rooted on increasing the awareness of the immeasurable benefits of HIV testing on healthcare delivery and health of the dental surgeon.

Routine medical examination is a highly recommended preventive behaviour. It helps in detecting disease conditions in early stage offering hope for a successful cure. An all encompassing medical examination includes HIV testing. In this study, 46.8% of the respondents' reason for the last HIV test was routine medical examination which is commendable.

Pre-employment retroviral screening is now considered as an acceptable component of pre-employment medical examination for health worker especially for those working in exposure prone area. Pre-employment retroviral screening result role, as a guide for posting employed health worker in work areas, and a baseline effective monitoring tool to prevent healthcare worker-patient HIV transmission remains questionable till date. Pre-employment retroviral screening result stands out is a tool for seeking workmen compensation claims. In this study 24.6% of the respondents have undergone retroviral screening as part of their pre-employment medical examination. The hospital policy on pre-employment screening may have influenced the number reasonably. Pre-employment retroviral screening for all dental surgeons was supported by 59.9% of the respondents in this study. This level of support is commendable and may have been due to heightened awareness of benefit of retroviral screening for every health worker.

Antenatal routine screening is a standard care in pregnancy as it benefits the mother and unborn baby. Its acceptance is high among pregnant women mainly due to the beneficial effects for the unborn babies although varies

from country to country. Antenatal screening accounted for about one-eight of the reasons for the last HIV screening among the respondents in this study. There exist medical reasons for HIV testing like blood donation, recipient of blood transfusion, percutaneous and mucocutaneous exposure, high risky behaviour and chronic illness characterized by fever, diarrhoea and cough. In this study, 13.8% of the respondents had their last HIV testing due to medical reasons.

Premarital HIV screening is a common reason for HIV testing. It offers mutual testing opportunity couples and provides benefits not only for the couple and but also for their future unborn child. In some churches, premarital HIV screening is a requisite for conducting wedding ceremonies. Nigerian dental nursing students had lent massive support for premarital HIV screening in an earlier study²³. In this study, premarital screening was the reason for HIV testing among 2% of the respondents.

One emerging standard of care today, is to screen all patients for HIV in all health care settings. Retroviral screening for HIV is justified because the associated disease is life-threatening. An estimated 25% of infected individuals are unaware of their status. Successful improvement in the uptake of HIV testing is expected to reduce new HIV infections by 30% annually. Unfavourable disposition to offering dental patients HIV testing will deprive them the chance of making informed decisions and giving consent with regard to treatment. It will also deny them the opportunity of taking the measures that would lessen the chance of HIV transmission from self to others and decision that would slow the progression of their infection. Center for Disease Control and Prevention (CDC) has recommended routine screening for patients in all healthcare settings in an attempt to increase availability, accessibility and opportunities for retroviral screening. The need to increase the population's awareness of its serostatus is increased as the access to HIV treatment becomes more widely available in Nigeria due to international collaboration. Routine testing in healthcare settings other than antenatal setting is instrumental to strengthening HIV care and prevention efforts²⁴. Early knowledge of ones HIV status is instrumental to prompt incorporation into adequate care for infected individual with resultant improved quality of life and longevity. The prevalence of HIV in dental practice among none previously diagnosed individual is on the rise making routine retroviral screening of dental patient more desirable than ever before. In this study, despite CDC recommendation, only 41.6% of the respondents supported routine retroviral screening for all dental patients. The lack of information and time needed for pretest counselling which is aimed the psychological abreaction arising partly from society's attitude to the disease and partly from the absence of curative treatment²⁵ may possibly account this level of support recorded. Prevention of effective infection control is a crucial part of dental practice²⁶ and should not depend on patients HIV status. In this study, 54.2% of the respondents indicated prevention of cross infection as their reason for rendering support for routine retroviral screening for all dental patients. HIV issues particularly HIV transmission has resulted in a lot of litigations in medical and dental practice worldwide²⁷. The increased awareness on HIV in Nigeria may unexpectedly lead to increased litigation. Thus it is not surprising that 42.1% of the respondents indicated medicolegal reasons as their reason for rendering support for routine retroviral screening for all dental patients. HIV testing and counselling is often referred to as the gateway to HIV prevention, treatment and care services, and needs to be linked to prevention and care to increase the coverage of services around HIV. Refusal of dental care to HIV status is an unacceptable discriminatory behaviour which is inimical to prevention of HIV transmission. Few numbers of the respondents advocated routine retroviral screening for all dental patients for discriminatory reason like refusal of dental treatment and care. Although this discriminatory intent is low, effort to eliminate is desirable.

Conclusion

Data from this study revealed that a significant proportion of actively practicing Nigerian dentists have undergone retroviral screening qualifying them as role model in terms of retroviral testing. To increase the acceptance and practice of retroviral screening, necessary information on the impediment would be an obvious necessity, so such a survey is thus advocated.

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