Immuno-Positivity of HIV among Long, Short Distance Drivers and Ordinary Drivers in Rivers State

ABSTRACT In this study, the immuno-positivity of HIV among long, short distance drivers and ordinary drivers in different motor parks in Choba and Rumuokoro community Rivers State was investigated for their retroviral status. A total of 81 commercial drivers between the ages 30-56 while 15 ordinary drivers between the ages 35-60 years old volunteered for the screening. Questionnaires were administered to the participants before their blood samples were aseptically collected. HIV screening was carried out using Determine HIV ½ strips. The results showed that a 40-year old commercial driver (3%) in the long distance driver category tested positive for HIV 2. However, in the short distance driver category, two commercial drivers aged 38 and 41 respectively (4%) tested positive for HIV 2. The ordinary drivers were all tested negative for HIV 2. The Level of HIV awareness among Long, short distance drivers and ordinary drivers is 84%. Sixteen are aware of all routes of transmission while 16% have very little or no Knowledge of the non-sexual routes. Response from the questionnaire showed a high level (84%) of awareness of HIV infection. Due to the nature of their occupation, commercial drivers are always exposed to multiple sex partners. Therefore, HIV awareness, prevention and treatment should be vigorously encouraged among commercial drivers.

Keyword: Awareness, HIV, Long and Short distance drivers, Ordinary drivers, Questionnaires

INTRODUCTION AND BACKGROUND

Human Immunodeficiency Virus (HIV) belongs to a special class of viruses called retroviruses. Within this class, HIV is placed in a subgroup of lentiviruses. HIV leads to Acquired Immunodeficiency Syndrome (AIDS) a condition which leads to failure in the immune system of very human life (Frank-Peterside *et al*., 2010). This is a highly variable virus which mutates very readily. This means there are many different strains of HIV, even within the body of a single infected person (Smith *et al*., 2005). Based on genetic similarities, the numerous virus strains may be classified into types, groups and subtypes. There are two types of HIV: HIV – 1 and HIV-2. Both types are transmitted largely by sexual contact, through blood and from mother to child. Human immunodeficiency virus and acquired immunodeficiency syndrome remain a major public health issue in the world today (Tang, 2009). HIV is threatening the very existence of every humankind as a one out of every 100 is affected by this disease in the world Thomas *et al* (2008). The group of people at higher risk of acquiring HIV infection are people with blood and blood product recipients, sex vendors and buyers, both heterosexuals and homosexual, mobile population, and patients treated with unsterilized medical instruments Frank-Peterside *et al* (2010). The risk of HIV infection through unprotected vaginal sex with an infected person is estimated to be 2 to 4 times higher for women than for men (Turmer, 2003). In many developing countries, women are dependent on men socially, economically and emotionally, thus impairing the ability to persuade the sexual partners to use condoms (Tang, 2009).

MATERIALS AND METHODS

Sample collection and location

A total of Ninety-Six (96) Long, Short Distance Drivers and ordinary drivers volunteered to participate in this study. Thirty-One (31) were Long Distance Drivers, fifty (50) were short distance drivers and fifteen (15) were ordinary drivers. Blood samples were collected from the study population after their consent was sought, at Choba Motor Park for Long distance drivers and Rumuokoro Motor Parks for short distance drivers and Choba and Rumuokoro communities for ordinary drivers. The samples were immediately transported to the laboratory for analyses.

Sampling Procedure and HIV Screening

The method used involved the collection of blood sample from the commercial drivers and ordinary drivers who volunteered for the study and the administration of questionnaires. The individual drivers who volunteered, their information was obtained by personal interview using questionnaires. This was followed by blood sample collection using sterile syringes which was later transferred into properly labeled EDTA bottles. The HIV tests are based on the principle of agglutination or immunodot reactions (Brooks *et al.*, 2002). The test kit used for the screening was Determine HIV – ½. The Determine Kit contains 10 HIV ½ synthetic peptide coated test card and recombinant antigen. The blood sample was aseptically collected and allowed to settle. The plasma was separated from the whole blood and then used the plasma for the screening. A drop of the plasma was aseptically drop on the HIV strip using Pasteur pipette. A positive result indicated double line colour change after about 60 seconds while a negative result indicated single colour change.

Data Analysis

The results obtained in the study were represented in tables. The prevalence of HIV was determined from the proportion of positive individuals under consideration and expressed in percentages.

Results

A total of 31 blood samples were screened for HIV from long distance drivers and only 1 (3%) was positive. A total of 50 blood samples were screened for HIV from short distance drivers and 2 (4%) were positive and 19 blood samples were screened for HIV from ordinary driver and 0(0%) was negative. This is show in table 1. The level of HIV awareness among long, short distance drivers and ordinary drivers is 84%. Eighty-seven to Eighty-two percent of long distance and short distance driver are aware of all routes of transmission while 80% ordinary distance drivers have very little or no knowledge of the non-sexual routes. Response from the questionnaire showed a high level (84%) of awareness of HIV infection as shown in table 2. The number of long distance drivers who reported that they sex with sex workers were 12 (39%), while 19 (61%) revealed that they had not had sex with sex workers. Fifteen (48%) reported that they used condoms while 16 (52%) revealed that they had not used condom during sexual intercourse with commercial sex workers**.** The number of short distance drivers who reported that they had sex with sex workers was 9 (18%) while 41 (82%) said that they had not had sex with sex workers. Twenty (40%) said that they used condoms while 30 (60%) said that they have not used condom during sex with commercial sex workers. The number of ordinary distance drivers who

reported they had sex with a sex workers was 5 (26%) while 14 (74%) said that they had not had sex with sex workers. Nine (47%) said that they used condoms while 10 (53%) said that they have not used condom as shown in table 3.

Table1: Total Immuno-positivity among Long, Short distance drivers and Ordinary drivers

Category	Samples Size	Number of Drivers Tested Positive	Percentage of Drivers Tested Positive (%)
Long Distance Drivers	31	1	3.2%
Short Distance Drivers	50	2	4.0%
Ordinary Drivers	19	0	0.0%

Table 2: HIV Awareness of Long, Short distance drivers and Ordinary drivers

Location	Knowledge of HIV	Knowledge of HIV Management	Knowledge of Non-sexual route of HIV Transmission	Knowledge of Window Period
Long Distance Drivers	27 (87%)	4 (13%)	4 (13%)	4 (13%)
Short Distance Drivers	41(82%)	9(18%)	9(18%)	9(18%)
Ordinary Distance Drivers	16(80%)	3(20%)	3(20%)	3(20%)

Table 3: Sexual History of Long, Short and Ordinary Distance Drivers

Location	Sample Size	None Condom Users	Condom Users	Drivers who had sex with a sex worker	Drivers who did not had sex with a sex worker
Long Distance Drivers	31	16 (52%)	15 (48%)	12 (39%)	19 (61%)
Short Distance Drivers	50	30 (60%)	20 (40%)	9(18%)	41 (82%)
Ordinary Distance Drivers	19	10(53%)	9(47%)	5(26%)	14(74%)

Discussion

HIV/AIDs is a pandemic affecting the poor and the rich, the educated and illiterate, the married and the single (Nelson *et al*, 2003). It has its tentacles in all groups of people. There are factors that predispose an individual to contact this virus. These factors include unprotected sex, use of contaminated sharp object, and receiving of infected blood products (Rick, 1999). An individual exposed to these conditions is said to be at high risk of contracting the virus (Orubuloye and Oguntimehin, 1999). Spending time away from home is one of those factors that predisposes an individual to behaviours that make them at risk of being infected with the virus (Risk, 1999). Long distance and short distance drivers are said to be a high risk group for HIV infection because of the nature of their occupation (Tang, 2009). This study was carried out among long distance drivers, short distance drivers and ordinary drivers in Rivers State. The number of commercial drivers and ordinary drivers who volunteered to participate in this study were low as compared to the total number of drivers in the motor parks and communities used in the study. The reason many of the drivers were unwilling to participate in this study may be as a result of the fear of knowing their HIV status. Also, stigmatization against individuals already infected with the virus discourages many people from getting their blood tested (Orubuloye and Oguntimehin, 1999). This is a big challenge towards the fight against the spread of HIV. A total immuno-positivity rate of 3.1% for HIV was recorded among the drivers for both long, short distance drivers and ordinary drivers. Low level of HIV immuno-positivity observed in this study could be as a result of increased awareness which resulted in less risky behaviour among the commercial drivers and ordinary drivers. In addition, the HIV test could have been carried out during when the viral load in the blood was very low which is the window period thus, resulted in the low antibodies production by the immune system. During the window period, the kit employed in this study shows a visual negative result when screened. This finding of low HIV immuno-positivity is similar to the immuno-positivity rate of 3.1% reported by Buseri *et aI* (2009) among prospective blood donors in Osogbo, Nigeria and differs from 6.0% immuno-positivity rate reported by Egah *et al* (2004) among blood donors in Jos, Nigeria. It also differs from the 10% immuno-positivity rate reported by Frank-Peterside *et al* (2010) among long distance truck drivers in Nigeria. From this study, most of the drivers were above 40years old, (35% for 40 – 44years and 39% for 45 and above). This could have resulted in the low immuno-positivity of HIV observed in this study. This finding agrees with Thomas *et al* (2008) who observed that the older the age, the lower immuno-positivity of HIV in a population. Furthermore, most of the drivers were found to be married to one partner. This may also account for the reason why the immuno-positivity rate of HIV was low in this study. This is because most of the drivers do not have multiple sex partners and as a result are at a lesser risk of being infected with HIV (Smith, 2004). Having multiple sex partners has been advocated as a risk factor for HIV (Barre-Sinousi et al, 1983). Furthermore, 100% of the drivers involved in the study were male while none (0%) were females. The reason is that there are very few female commercial drivers and ordinary drivers in the State. This could be the reason why the rate is low in this study. It was observed that on the basis of HIV awareness that 87%, 82% and 80% of the long distance, short distance drivers and ordinary drivers respectively had knowledge of HIV while a lower proportion of the drivers had knowledge of HIV management and non-sexual route of HIV transmission. This high knowledge of HIV recorded in the study could have contributed to the low HIV immuno-positivity rate observed in this study. This is because when there is a high level of awareness, one takes necessary precaution to avoid risk behaviours that could predispose him to getting infected with HIV. However, more awareness programs should be

carried out on HIV management and other non-sexual route of HIV transmission in order to further reduce the immuno-positivity of HIV.

Conclusion

The immuno-positivity of HIV among the drivers studied was found to be low. However, due to the nature of their occupation, commercial drivers are still at a higher risk of getting infected with HIV as they are always exposed to multiple sex partners. Therefore, HIV awareness campaigns should be encouraged among commercial drivers, ordinary divers and in the public at large in order for them to be fully equipped with knowledge needed for them to avoid the virus. This awareness campaigns should also include the different non-sexual route of HIV transmission and HIV management.

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