MedCrave
Step into the World of Research

Nursing & Care Open Access Journal

Short communication

Open Access

CrossMark

# Incidence rate for HIV and viral hepatitis co-infection amongst patients attending anti-retroviral clinic in ORLU, Imo State, South Eastern Nigeria

**Keywords:** viral hepatitis, patients, HIV, co-infection, adult, hospital, healthcare services

Volume 2 Issue 4 - 2017

Ifeanyi OC Obiajuru,[1] Immaculata O Uduchi[2]

[1]Department of Medical microbiology, Imo State University, Nigeria

[2]Department of Microbiology and Parasitology, Imo State University, Nigeria

**Correspondence:** Ifeanyi OC Obiajuru, Department of Medical microbiology, Imo State University, Nigeria, Email drifeanyi_oc@yahoo.co.uk

**Received:** February 12, 2017 | **Published:** March 14, 2017

## Short communication

In Nigeria, hepatitis and malaria are common health challenges.[1] However, the prevalence of viral hepatitis (hepatitis B and C) is below 5.0% among Immuno-competent persons and between 5 to 20% amongst HIV-positive patients.[2–5] Much attention is not given to viral hepatitis co-infection in many HIV-care centers in Nigeria, probably because the donor agencies (Paper) rarely include viral hepatitis in their programmes. Attention is generally given to diagnosis and anti retroviral therapy. Probably in all centers, reasonable attention is given to tuberculosis co-infection but viral hepatitis co-infection receives little or no attention. Our study at Imo State University Teaching Hospital Orlu, one of the notable HIV-care centers in south eastern Nigeria, 132 (22%) out 580 new enrollments in 2016 had viral hepatitis co-infection.

We examined 236 adult male and 344 adult female HIV-positive patients attending anti-retroviral clinic at Imo State University Teaching Hospital Orlu. We also examined 315 adult males and 377 adult females from the general out patients department as well as 209 adult males and 350 adult females from specialist clinics within the same period (January to December, 2016). New patients visiting the hospital for the first time were used for the study; old patients who have been receiving care in the hospital were excluded from the study. Also patients below 18 years were excluded from the study. Ethical permit was obtained from the Ethical Committee, of the hospital. Clinical records of HIV-positive patients were obtained from the Measurement and Evaluation Unit of the HIV clinic. Patients consent was obtained from non-HIV patients by signing the consent section of our study questionnaire. Blood samples HIV -positive patients collected for hospital use at the HCT-laboratory unit were used for examinations to examined for hepatitis B and C co-infection using rapid test kits (Global®), and CD4 count using Cyflow counter. Their HIV-staging using WHO standards were obtained from the measurement and evaluation unit. The patients were followed up and re-examined for CD4, after 6 and 12 months. Their HIV-staging using WHO standard was re-evaluated at the 12$^{th}$ month. Blood samples of non-HIV. Patients at the general out-patient clinic and specialist clinic were collected after they had given consent and examined for HIV and viral hepatitis (B and C), using rapid test kits.

The findings Tables 1 & 2 showed that the 94(16.2%) HIV – positive patients, had hepatitis B, 38(6.6%) had hepatitis C. In contrast, 23(3.3%) patients from the general out-patients clinic and 13(1.9%) patients from the specialist clinics had hepatitis B while 12(2.2%) from general out patients clinic and 7(1.3%) from specialist clinics had hepatitis C. Incidence of Viral hepatitis infection was remarkably higher amongst HIV-positive patients than HIV-negative patients attending Orlu. Analysis of the data using Chi square showed significant difference ($p<0.05$) in the incidence of viral hepatitis between HIV - positive and HIV-negative patients. Previous studies, Umolu et al.[3] reported 5.8% prevalence of hepatitis B amongst HIV-positive patients in Benin, Adewole et al.[5] reported 11.5% prevalence of hepatitis B and 2.3% prevalence of hepatitis C amongst HIV patients in Abuja. These and the present study showed that viral hepatitis is a major factor affecting HIV-positive patients receiving care at different centers in Nigeria. Our review of CD4 counts and HIV staging of the patients Table 3 showed that both CD4 counts and HIV-staging of patients having HIV infection only improved better than patients with HIV and viral hepatitis co-infection. This finding indicates that viral hepatitis co infection with HIV is a major challenge in caring for HIV-positive patients. We therefore suggest that adequate attention to be given to viral hepatitis infections amongst HIV-positive patients across the country. Donor agencies sponsoring HIV programmes in the country will do well if they give reasonable attention to HIV and viral hepatitis co – infections. Managing hospitals in the country and health policy makers in the country should on their own give due attention to HIV and viral hepatitis co-infection to make their healthcare services adequate and better. The incidence of HIV and hepatitis co-infection was higher amongst females than male patients. This finding corroborates previous reports by Umolu et al.[3] in Edo State and Denue et al.[6] who reported higher prevalence of viral hepatitis and HIV co-infection among female patients than the males.

**Table 1** Incidence of viral hepatitis in orlu, South-Eastern Nigeria

| | HIV-Clinic | | (%) | General out patient clinic | | | Other clinics(%) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Patients** | **Number examined** | **HBV-positive** | **HCV-positive** | **Number examined** | **HBV-positive** | **HCV-positive** | **Number examined** | **HBV-positive** | **HCV -positive** |
| Male | 236 | 33(14.0) | 13(5.5) | 315 | 10(3.2) | 5(1.6) | 209 | 4(1.9) | 2(1.0) |

Table Continued....

| | HIV-Clinic | | (%) | General out patient clinic | | | Other clinics(%) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Patients** | **Number examined** | **HBV-positive** | **HCV-positive** | **Number examined** | **HBV-positive** | **HCV-positive** | **Number examined** | **HBV-positive** | **HCV - positive** |
| Female | 344 | 61(17.7) | 25(7.3) | 377 | 13(3.4) | 8(2.1) | 350 | 8(2.3) | 5(1.4) |
| Total | 580 | 94(16.2) | 38(6.6) | 692 | 23(3.3) | 13(1.9) | 557 | 12(2.2) | 7(1.3) |

**Table 2** Incidence of HIV and viral hepatitis co-infection in orlu

| Patients | Number examined | Number infected | | | | (%) | |
|---|---|---|---|---|---|---|---|
| | | HBV | Positive | HCV | Positive | HBV & HCV | Co-infection |
| Male | 236 | 29 | (12.3) | 10 | (4.2) | 7 | (3.0) |
| Female | 344 | 52 | (15.1) | 19 | (5.5) | 15 | (4.4) |
| Total | 580 | 81 | (14.0) | 29 | (5.0) | 22 | (4.0) |

**Table 3** Progressive CD4 and HIV-Staging of patients

| Patents | Sex | Number examined | Mean CD4 Count (cells/µl) | | | HIV-Staging(WHO - Staging) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st Visit | 6th month | 12th month | 1st Visit | | | 12th month | | |
| | | | | | | Stage 1 | Stage 2 | Stage 3 | Stage 1 | Stage 2 | Stage 3 |
| HIV only | M | 208 | 394 | 637 | 642 | 285 | 7 | 5 | 290 | 7 | 0 |
| | F | 240 | 358 | 644 | 651 | 421 | 7 | 0 | 428 | 0 | 0 |
| HIV& HBV | M | 29 | 242 | 259 | 288 | 54 | 6 | 2 | 58 | 4 | 0 |
| | F | 52 | 221 | 248 | 294 | 155 | 6 | 1 | 158 | 3 | 0 |
| HIV & HCV | M | 10 | 274 | 301 | 345 | 30 | 5 | 0 | 32 | 3 | 0 |
| | F | 19 | 302 | 322 | 364 | 82 | 7 | 2 | 88 | 3 | 0 |
| HIV, HBV & HCV | M | 7 | 108 | 95 | 23 | 8 | 1 | 0 | 6 | 2 | 1 |
| | F | 15 | 214 | 148 | 109 | 29 | 2 | 1 | 28 | 2 | 2 |

## Acknowledgements

None.

## Conflict of interest

The author declares no conflict of interest.

## References

1. Ifeanyi OC Obiajuru, Fredrick Anolue, Prosper OU Adogu. Incidence of hepatitis and malaria amongst adult patients at Imo State University Teaching Hospital Orlu, South-Eastern Nigeria. *Unique Research Journal of Medicine and Medical Sciences*. 2014;2(2):13–18.
2. Inyama U, Uneke P, Uneke J, et al. Prevalence of antibodies to haepatitis C virus among Nigerian patients with HIV infection. Online and unpaginated; 2005.
3. Umolu I, Okoro LE, Orhue P. Human Immune-Deficiency Virus (HIV) seropositivity and Haepatitis B surface antigenaemia (HBs-Ag) among Blood donors in Benin City, Edo State, Nigeria. *African Journal of Health Sciences*. 2005;5(1):55–58.
4. Otegbayo JA, Taiwo BO, Akingbola TS, et al. Prevalence of hepatitis B and C serotypying in Nigerian cohort of HIV - infected patients. *Annals of Hepatology*. 2008;7(2):152–156.
5. Adewole OO, Anteyi E, Ajuwon Z, et al. Haepatitis B and C co-infection in Nigerian patients with HIV infection. *Journal of Infectious Disease*. 2009;3(5):368–375.
6. Denue BA, Ajayi B, Abja AU, et al. A survey of Haepatitis B and C virus prevalence in human immune-deficiency virus patients in tertiary health institution in North eastern Nigeria. *International Journal of Medicine and Medical Sciences*. 2012;4(1):13–18.