
A review of viral hepatitis in HIV positive patients using UBTH as case study

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SUMMARY

INTRODUCTION: Nigeria belongs to the group of countries highly endemic for viral hepatitis, unfortunately little is known about the burden of co-infection in HIV positive patients and the interaction between these two viruses as it affects the natural history of viral hepatitis, management and prevalence.

METHODS: This work was based on the review of medical records of 200 HIV positive patients, (130 females and 70 males). Ages: 17-80years at the University of Benin Teaching Hospital, Benin city, Nigeria.

RESULTS: HCV/HBV infection is more serious in HIV- infected patients and this leads to liver damage more quickly. It aggravates the risk of antiretroviral (ARD) associated hepatotoxicity. HIV is also linked to "sero-silent" HBV infections, which present a problem with diagnosis.

Prevalence of co-infection of 26.9% for HBV which is higher than in HIV negative patients with a prevalence of 14.3%. HCV had a prevalence of 5.7%. The prevalence of the test done was found to be 25.5% for HBV and 3% for HCV. A prevalence of 17.64% for HBV in HIV positive patients and 16.7% for HCV was estimated.

CONCLUSION: The study confirms that HIV and HBV/HCV interact to a large extent. Therefore there is need to sensitize health workers in Nigeria on the need to take cognizance of this fact and improve on the current low level of test conducted on HIV positive patients and vaccination done. Early diagnosis and vaccination can prevent mortality due to co-infection.

It is also necessary that studies be carried out on the interaction between HIV and Hepatitis virus infection as it affects HAART.

KEYWORDS: Viral Hepatitis; HIV; HCV; HBV.

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Introduction

HIV/AIDS pandemic is currently confronting the world. Much attention is been paid to the management of the disease using drugs in order to prolong the life of the victims and help them to lead a normal life.

With this advent of HIV/AIDS, many other infectious diseases had also resurfaced creating even more challenge to manage and resulting in death of a lot of HIV patients on HAART. Examples of such infectious disease which has captured much attention all over the world including Nigeria is Tuberculosis, but on the other hand Viral Hepatitis especially hepatitis B and C

has not really been paid much attention, either by the Government, Health Policy makers, or even Clinicians in Nigeria [1].

Co-infection between HBV/HIV and HCV/HIV is a state in which an individual is infected with both the Human immunodeficiency virus and the Hepatitis B or C virus. In other words there is a co-existence of both viruses in an individual. Co-infection with human immunodeficiency virus (HIV) and hepatitis C virus (HCV) and hepatitis B virus (HBV) is a growing public health concern. There is growing body of evidence about the relevance of viral hepatitis in the frame of HIV/AIDS epidemics in Nigeria, and those due to

hepatitis B and C viruses are especially note worthy. This epidemiological situation has an increasing clinical importance [2].

Concomitant disease state is known to interact with efficacy of a drug, it is not surprising therefore that there is a continued debate on the benefits and strategies of anti-viral treatments against hepatotropic viruses in co-infected patients, there is also a growing concern about the possible hepatotoxicity in HIV patient co-infected with HBV/HCV receiving HAART and how this could result in increase mortality in HIV patients [7].

Because hepatitis B virus are spread in similar ways; sex, blood transfusion and use of needles notably, new cases of acute HBV infection in persons known to have HIV infection could be used to assess how the campaign/counseling on the prevention of transmission of HIV had been adhered to [3].

The objective of this work is to review medical records of HIV positive patients in University of Benin Teaching hospital (UBTH) to ascertain:

- The frequency of co-infection of HIV with HBV/HCV.
- The level of management of patients co-infected by HIV and HBV/HCV.
- To draw the attention of relevant authorities on the need to carryout more studies on the areas of viral hepatitis in HIV patients.

Materials and methods

Study area

The study was a retrospective study carried out at the University of Benin Teaching hospital (UBTH), Benin city of Edo state in Nigeria.

The area is known to be warm with a lot of rainfall. It is however not known to have the highest prevalence of sexually transmitted disease particularly HIV infection.

HIV- positive patient's case notes.

A review of 200 HIV- positive patients' case notes was done.

This was made up of 130 females and 70 males, between 17 -70 years. The case notes used were those of patients attending clinic and no case of dead patients were included.

Note were taken of the HIV positive and HBV, HCV status of each patient, also the CD4 counts were also noted.

Ethical approval:

Approval for the use of the case notes were obtained from the ethical committee of the University of Benin Teaching Hospital, Benin City. Edo State.

Results

Prevalence of HBV/HCV test and positive result in HIV positive patients:

Of the 200 patient case notes reviewed, 25.5% were tested for HBV, 3% tested for HCV, of which 17.65% were positive for HbsAg and 16.67% for anti HCV immunoglobulin. This is shown in Table 1. There were more conducted for the female (29.57%) than the males (18.57%).

However the males showed a prevalence of 30.77% for HbsAg to the females, 23.16%.

More females were also tested for HCV (3.08%), than the male (2.86%), of these the only positive test was a female.

CD4 Counts in HIV Positive patients:

Table 2 shows the CD4 counts in HIV positive patients. Much improvement was shown among patients managed with HAART. A few showed progression of HIV infection despite HAART (5 cases) of which 3 cases were HbsAg positive [7].

Table 1: Prevalence of HBV/HCV test and positive result in HIV positive patients.

Sex	No reviewed	No tested for HBV	No tested for HCV	% tested for HBV	% tested for HCV	No. infected with HBV	No. infected with HCV	% infected with HBV	% infected with HCV
Male	70	13	2	18.57	2.86	4	0	30.77	0
Female	130	38	4	29.23	3.08	5	1	23.16	25
Total	200	51	6	25.50	3.00	9	1	17.65	16.67

No: indicates number.

Table 2: CD4 Counts before and after management (6 months duration) in some HIV positive patients.

S/N	CD4 Before	CD4 After	S/N	CD4 Before	CD4 After
1	131	680	16	263	584
2	104	728	17	161	467
3	365	605	18	102	467
4	88	542	19	115	153
5	110	321	20	161	234
6	73	439	21	482	641
7	219	88	22	90	125
8	102	227	23	58	327
9	146	647	24	100	380
10	307	730	25	88	639
11	226	423	26	599	200•
12	131	219	27	365	100*
13	161	565	28	66	110•
14	146	499	29	219	88*
15	46	204	30	153	161*

*: Patients tested positive to HBsAg

•: Patients not tested at all.

Discussion

In HIV infected patients, co-infection with HCV or HBV have been associated with a reduced survival rate [4].

The increased risk of HCV or HBV related advanced liver diseases in people with HIV infection makes early HBV/HCV diagnosis a priority [5]

Unfortunately this is not so in Nigeria. In this study, we established the very low number of HIV patients diagnosed for HBV/HCV infection.

The result showed 24.29% for HBV and 2.86% for HCV. The reason could be due to the lack of information on the effect of HBV/HCV co-infection in HIV and the possible liver toxicity among clinicians.

Analysis of the sex related number of patients that undergo test showed that more women were tested than men. The obvious reason for this is the higher percentage of women that presents in the hospital with the disease. The seroprevalence of HBV/HCV amongst HIV positive patients showed that the male were more infected than the females for hepatitis B virus with a prevalence of 30.77%. While for HBV, only one patient tested negative. The prevalence of viral hepatitis is reported to be higher in males Nigerian than females [6], probably due to the higher frequency of exposure to infected blood and blood products by the male folks as a result of occupation and social behavior.

The age related prevalence of HIV from this study shows the highest prevalence among those in their

fourth decade of life. The reason for this might be as a result of latency period of the disease which could have been contracted when the patients was a teen or young adult and finally manifest the first symptoms while in their 30's.

Analysis of the CD4 count shows the most prevalent at presentation to be between 100-150 cell/uL. At this level, HAART ought to have been commenced going by CSC recommendation of 200 cells/uL for commencement of therapy but for late presentation [7, 8]

Improvement is largely seen after management with HAART, but some cases shows decrease in CD4 cell count despite HAART, this could be as a result of non compliance with ART.

Conclusion

This study has been able to establish the fact that inadequate attention is paid to viral hepatitis infection in HIV positive patients.

It is pertinent to also note that a moderate prevalence exists for HBV and probably HCV and there is need to conduct further studies in this direction.

List of abbreviations.

ART	-Antiretroviral Therapy.
CDC	-Center for Disease Control and Prevention.
HAART	-Highly Active Antiretroviral Therapy.
HBsAg	-Hepatitis B Surface Antigen
HBV	-Hepatitis B Virus.
HCV	-Hepatitis C Virus
HIV	-Human Immunodeficiency Virus.
UBTH	-University of Benin Teaching Hospital.

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