

# Seroprevalence of Hepatitis B, Hepatitis C & Syphilis in HIV Positive Patients Attending STD Clinic

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**Abstract:** Introduction: HIV, Hepatitis B and Hepatitis C are mainly transmitted through blood transfusion and blood products, sexual contact. Syphilis is caused by *Treponema pallidum*. Syphilis raise the risk of HIV infection among the individuals of homosexuals and heterosexuals. Aim: To detect the Prevalence of Hepatitis B, Hepatitis C and Syphilis in HIV positive patients. Materials & Methods: 100 HIV positive patients who attended the STD Department, Institute of Venereology, Chennai were selected randomly. The Institute ethics committee clearance was obtained. Observations: In 100 patients, 70 were males and 30 were females. 33 patients and 25 married patients belonged to 31-40 years. 6 patients partners were positive for HIV. Among 13 HBsAg positive HIV patients, 9 were male and 4 were female. Prevalence of Syphilis in HIV positive patients was 2. Conclusion: In our study group the prevalence of Hepatitis B was 13%, Hepatitis C was 1%, Syphilis was 2%.

**Keywords:** Hepatitis B, Hepatitis C, Hiv, Syphilis, Seroprevalence

## 1. Introduction

HIV is associated with a number of viral disease which are transmitted through similar routes of transmission like that of HIV which may include Hepatitis B, and Hepatitis C. Viral Hepatitis is the primary infection of liver which is caused by a heterogenous group of Hepatitis viruses namely A, B, C, D, E<sup>6</sup>. Syphilis is an infectious disease caused by *Treponema Pallidum*. Syphilis is complexly related to HIV infection, and are thought to raise the risk of HIV infection among the individuals of homosexuals and also heterosexuals.<sup>1,2</sup>

## 2. Materials & Methods

100 HIV positive patients who attended the STD Department, Institute of Venereology, Chennai were selected randomly. The Institute ethics committee clearance was obtained. A detailed and thorough history was obtained pertaining to the following parameters: Age, Occupation, Socioeconomic status, Marital and obstetric history, Sexual history, History of blood transfusion, History related to sexually transmitted infections.

Past, Personal, Treatment history were documented along with clinical examination.

Under aseptic precautions, about 5ml of blood is withdrawn from a vein and centrifuged by 2500 RPM to separate the serum, the sample is then tested for HIV by Rapid test (dot immunoassay) kit. HIV positive blood samples are then subjected to Blood VDRL test for syphilis, HEPALISA kit test for Hepatitis B, 3<sup>rd</sup> generation Micro Elisa KIT Test for Anti HCV antibody.

## 3. Results

Out of 100 HIV positive patients, 70(70%) were males and 30(30%) were females. The most commonly affected age group was 31 – 40 years with 33 (33%) patients, closely followed by 20-30 years age group with 28 (28%) patients. (Fig:1).

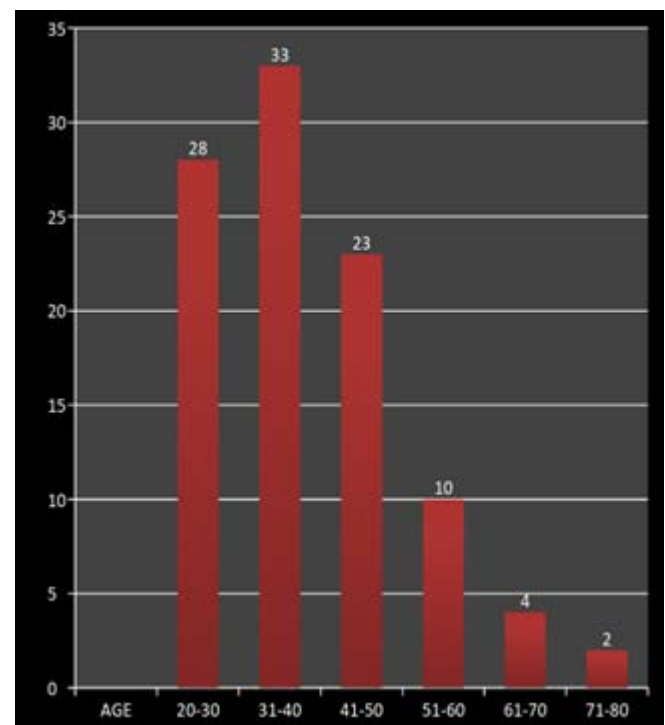


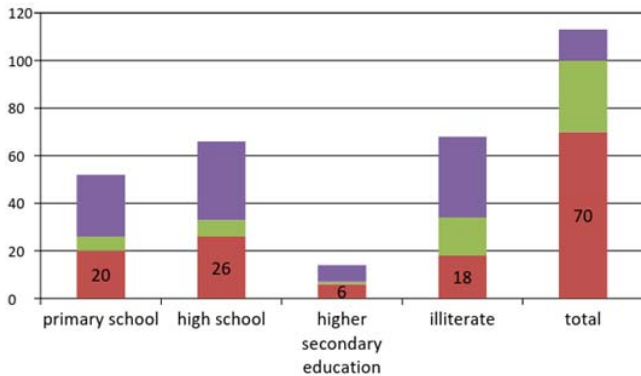
Figure 1: Age Distribution of HIV Positive Patients

22 males and 11 females were in the age group of 31-40years. Out of the 70 male patients, 49(70%) were alcoholics and the most common affected age group were 20-30 years with 15(21.4%) patients. Among the 70 male

patients, 48(68.5%) were smokers with 13 patients in the age group of 31-40 years.

Out of 100 patients, 78 were married and among these the most common affected age group was 31-40 years with 25(25%) patients followed by 41-50 years with 2(23%) patients. 40 patients were manual labourer, 7 were mason followed by auto driver, & private company worker by occupation.

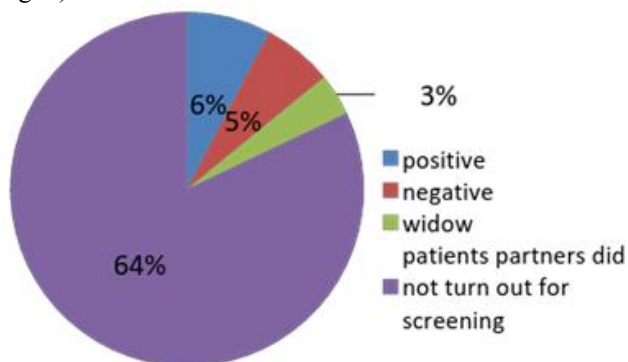
Among 100 patients, 34 were illiterate and the highest level of literacy among others were upto high school (33%) followed by primary school (26%)(Fig : 2)



**Figure 2:** Literacy Level in HIV Positive Patients

Out of 13 HBs Ag positive HIV patients, the maximum number of affected individuals belonged to 41 to 50 years with 5(38.6%) patients followed by 20 to 30 years with 4(30.7%) patients. 9(69.2%) were male and 4(30.7%) were female. 8 patients were alcoholics and 8 were smokers. Married individuals were maximum in the age group of 20 - 30 years with 4(30.7%) patients and 41-50 years with 4(30.7%) patients. 4 were illiterate and the highest level of literacy among others were upto primary school with 5(38.4%) patients followed by high school with 4(30.7%) patients. The most common occupation was manual labourer with 5(38.4%) patients. CD4 count was decreased in 3(3%) of patients.

Out of 78 married individuals in our study, 6(6%) partners were positive for HIV, 5(5%) partners were negative for HIV, 3(3%) patients were widow and partners of 64 patients did not turn out for screening in spite of screening advice. (Fig: 3)



**Figure 3:** Partner Screening of HIV Positive Patients

Among 100 HIV infected patients, the major high risk groups were heterosexuals 95% followed by alcoholics 49%,

smokers 48%, MSM 2%, bisexuals 2%, CSW 1%, and blood transfusion.

Prevalence of Syphilis in HIV positive patients in our study was 2(2%). Out of the two patients, one patient was VDRL reactive (1:16 dilution) and the other patient was both VDRL reactive (1:260 dilution) and TPHA positive. Prevalence of Hepatitis C was 1%.

#### 4. Discussion

In our study in HIV positive, the seroprevalence of Hepatitis B infection was 13%, which was similar study to 16.7% seroprevalence study by Sandhya Sawat in Mumbai<sup>3</sup>. The sero prevalence of hepatitis C in our study was 1% which was similar to the studies conducted by Guimaraes<sup>4</sup> Nebenzahl in which the seroprevalence of Hepatitis C infection in HIV positive patients was 0.9% and Sandhya Sawat and Sachee Agrawal<sup>3</sup> the seroprevalence of Hepatitis C with HIV was 1.3%. The combined infection of Hepatitis B and Hepatitis C was 1% in our study which was similar to a study of 0.5% conducted by Sumit Goyat<sup>5</sup> and 0.9% conducted by Guimaraes.<sup>4</sup>

In our study the prevalence of Syphilis in HIV positive patient was 2(2%) which was comparable to a study conducted by Guimaraes<sup>4</sup> in which 2 individuals had Syphilis and HIV co-infection out of 431 patients (0.4%)

#### 5. Conclusion

Routine screening for Hepatitis B & C, Syphilis should be encouraged in HIV positive patients since its early detection can decrease the morbidity and mortality among these patients.

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