

Overview

Injecting drug use forms a major route of HIV transmission in North East India. Due to similar routes of transmission, co-infection with HIV and Hepatitis C (HCV) is considered to be high in the North East. Previous data document higher rates of liver failure and death with HIV-HCV infection compared to HIV mono-infection, but data from India is scarce. Treatment of HCV in HIV-HCV co-infection reportedly presents additional challenges. While HIV-HCV co-infection is considered to be a silent medical crisis among people who inject drugs (PWID) in North East India, limited evidence on HIV-HCV co-infection remains a barrier to policy decisions and expansion of services to co-infected PWID in this region.

Key Questions

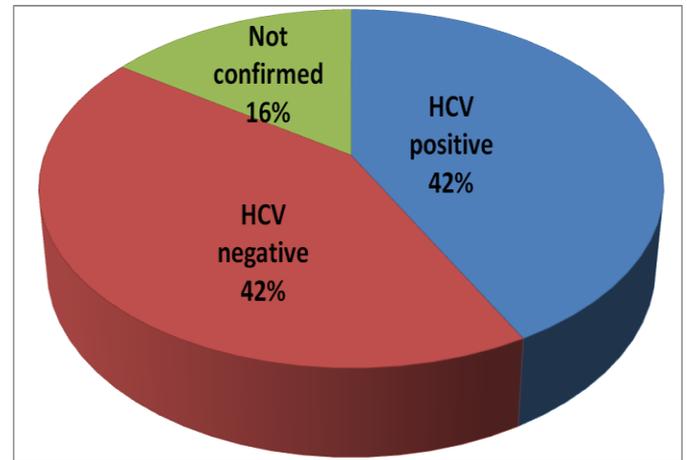
During 2007-2010, Catholic Relief Services (CRS) supported an assessment of HIV-HCV co-infection in the North East to find answers to the following key questions:

- What is the proportion of HIV-HCV co-infection among PWID on ART in the three North East states of Manipur, Mizoram and Nagaland?
- What is the difference, if any, in liver complications among PWID on ART with and without HCV co-infection?
- What are the outcomes of HCV treatment in HIV-HCV co-infected PWID on ART?

Review of HCV Status

Methods

- Stratified random sampling was done of PWID on ART with proportional allocations of 312 out of a total of 1643 sero-positive PWID on ART in Manipur, Mizoram and Nagaland.
- The HCV status of 280 PWID on ART was confirmed by review of previous test records dating from 1996 – 2008 at ART centers in Manipur and Mizoram. In Nagaland the HCV status was confirmed by HCV testing on enrolment to the study, supported by Nagaland State AIDS Control Society (SACS).



Proportion of PWID on ART co-infected with HIV & HCV

Results

- 42% of study participants ($n=312$) were confirmed HCV positive as per previous third generation Elisa test records available with ART centers (Manipur & Mizoram) or upon enrolment in the study (Nagaland).
- 42% were confirmed HCV negative in the 3 states and 16% could not be confirmed (not tested/results not known/intermediate results on testing).

Limitation

There could be under-reporting of Hepatitis C since HCV status of the majority of participants (280 of 312) was confirmed based on record review of third generation test results conducted prior to the study.

Clinical Profiling

Methods

- Six months of clinical profiling of PWID on ART compared the impact of HCV on liver complications among 26 HIV mono-infected and 26 HIV-HCV co-infected PWID.
- Seven liver markers were assessed at Month 1, Month 3 and Month 6: USG, total bilirubin, SGOT, SGPT, SGGT, SAP, and serum albumin.

Clinical Profiling Results

- One clinical marker (SGGT) was significantly worse for the HIV-HCV co-infected PWID on ART at Month 1 of profiling compared to those with HIV mono-infection.
- No significant differences were identified at the mid-point (Month 3) or end of clinical profiling (Month 6).

Clinical Factor	HIV infected (n = 26)	HIV-HCV co-infected (n = 26)
Median CD4	327/cumm	335/cumm
No. years on HAART	5	5
% on NNRTI NVP-based ART	36	50
% on NNRTI EFV-based ART	64	50
% treated for TB	56	58
# liver markers significantly worse than comparison group:		
<i>Month 1</i>	0	1 – SGGT (p = 0.37)
<i>Month 3</i>	0	0
<i>Month 6</i>	0	0

Profiling of HIV infected & HIV-HCV co-infected PWID on ART

Treatment Case Studies

Methods

Treatment outcomes were assessed for 3 HIV-HCV co-infected PWID on ART. All three were treated with a combination therapy of Pegylated Interferon (alpha 2a) and Ribavirin 400mg twice daily for 48 weeks.

Results

Sustained Virological Reduction (SVR) was achieved in Case One by week 24 of HCV treatment; Case One developed anemia (Hb 7.9 gm/dL) that was managed with blood transfusion. Cases Two and Three achieved SVR by treatment week 12 without adverse reactions.

Subject	Case 1	Case 2	Case 3
Genotype	1	3	3 & 4
Baseline HCV Viral Load	1.8 million	0.7 million	49,734
Baseline CD4	434	377	964
SVR achieved by	24 weeks	12 weeks	12 weeks
Adverse reactions	Anemia	None	None

Conclusions

- HCV is a significant health issue for HIV-positive PWID in North East India.
- Record review showed HCV co-infection among PWID on ART as lower than elsewhere reported, but large enough to influence policy decisions for the North East.
- Marginal differences in liver functions were observed among HIV mono-infected and co-infected subjects on ART, but the results were not significant.
- HCV treatment may be well-tolerated by co-infected individuals on ART. Further study of a larger number of HIV-positive PWID is needed to improve understanding of HCV treatment response in this important population.
- Providers should consider routine screening for HCV among HIV-positive patients in the North East, given the high prevalence of HIV-HCV co-infection. When possible, treatment should be offered to minimize the consequences of liver disease.
- Case studies suggest no reason to withhold HCV treatment from PWID on ART and that successful treatment is possible in resource limited settings.

Recommendations

- Provide free access to HCV anti-body testing and follow-up diagnostic (RNA and genotype) for PWID, including systematic pre and post-test counseling.
- Ensure access to affordable HCV treatment, including treatment for PWID who are co-infected with HIV.
- Develop an India-specific policy on HCV prevention, diagnosis and treatment, with treatment guidelines.
- Incorporate HCV awareness and prevention in national HIV and blood-borne disease prevention programs.

Partnership

Major funding for this study was provided by CRS with additional support from the Coalition of Asia Pacific Regional Networks on HIV/AIDS (7 Sisters). The study was conducted by Population Health Institute.

Special appreciation goes to the following collaborators for their support: Manipur SACS, Government of Manipur; Mizoram SACS, Government of Mizoram; Nagaland SACS, Government of Nagaland; the study's Technical Advisory Group members and Ethical Committee.

Catholic Relief Services is the international humanitarian agency of the Catholic community in the United States. The agency provides assistance to people in more than 100 countries and territories based on need, regardless of race, nationality or creed. CRS has been present in India since 1946. Its national office is located in New Delhi. For more information, please visit www.crs.org.

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