

GENOMIC DIVERSITY OF HCV AMONG INTRAVENOUS DRUG USERS IN THE DISTRICT OF DARJILING, 'THE QUEEN OF HILLS', INDIA

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Abstract:

Background: Person who inject drugs (PWIDs) are one of the vulnerable groups of population for HCV reservoir and transmission. It is also a major hindrance in the path of the WHO-approved HCV eradication initiative. This study was conducted to determine HCV seroprevalence, viremia, and genotype distribution in the district of Darjiling, which is located in the Himalayan region and very close to international boarder of China, Bangladesh, Nepal and Bhutan, and also acts as the gateway for the north-east states of India.

Method: A total of 114 blood samples were collected from PWIDs. All samples were subjected to HCV-ELISA, HCV seropositive samples were then checked for viremia and RNA positive samples were processed for HCV genotype determination by population-based Sanger sequencing.

Result: Out of 114 samples, 88 were HCV sero-reactive (77.19%). Males were the major drug users among this population (98.24%) and the age group between 25 and 35yr had shown significantly higher (p-value <0.001) HCV seroprevalence than other age groups. Among the four subdivisions in Darjiling, Kurseong subdivision had shown significantly higher HCV seroprevalence than others (p-value <0.001) followed by Kalimpong, Darjiling, and Siliguri. Out of 88 HCV seropositive samples, 63 samples (71.59%) were RNA positive. Kalimpong subdivision had shown the highest viremia (p-value-0.036) followed by Kurseong, Darjiling and Siliguri. Two genotypes and 3 subtypes were circulated in this region. HCV genotypes 3a and 1a were equally dominated (48% each) followed by HCV genotype 3b.

Conclusion: This study showed a brief epidemiology and genetic distribution of hepatitis C among PWIDs populations in this bordering area of West Bengal, India, where immediate action at the local, national and international levels is required to combat the spread of HCV in this region.

Disclosure of Interest Statement: We hereby declare that we do not have any conflict of interest.