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EPIDEMIOLOGICAL ASPECTS OF HCV MONOINFECTION AND HIV/HCV COINFECTION AMONG COCAINE USERS IN THE BRAZILIAN STATE OF PARÁ, EASTERN AMAZON

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BACKGROUND

Hepatitis C virus (HCV) and human immunodeficiency virus (HIV) infections are both major global health problems, each with its own specific unsolved and difficult issues for prevention, pathogenesis, and therapy [1]. Currently, sharing of drug paraphernalia and unprotected sex are the main forms of HCV and HIV transmission worldwide [2]. In South America, illicit drugs users are mainly cocaine users [3]. Epidemiological data on the status of co-infection HIV-HCV among cocaine users in the Amazon region are scarce, although clinical cases reports or pathologies associated with these viruses in other populations are numerous [3,4]. This study determined the prevalence, and factors associated with HCV mono-infection and HIV/HCV co-infection among cocaine users in the Brazilian state of Pará, eastern Amazon.

METHODS

This cross-sectional study was based on the information and biological samples provided by cocaine users who attended at private and public drug-treatment centers, and it was carried out in an area of intense consumption of illicit drugs located in 20 municipalities in Pará, eastern Amazon. In all samples, the presence of HCV was determined by enzyme immunoassay (EIA) and real-time PCR [3]. Additionally, HIV-1/2 has also been verified using EIA [4]. The identification of the factors associated with viral infections was based on the use of a structured questionnaire. Associations between viral infections and possible risk factors were assessed using Fisher's Exact Test. Furthermore, Odds ratio and 95% confidence intervals were constructed.

RESULTS

During 2008-2015, 495 cocaine users participated in this study. The majority of cocaine users were males, single/unmarried, less than 35 years old, with a low level of education, and with a monthly family income equal to or less than R$678/US$280. All cocaine users reported preference for consumption of non-injecting cocaine. However, 97 users mentioned having ever used at least once in a lifetime injecting cocaine. Tobacco and alcohol were also commonly consumed. One hundred and ninety-three cocaine users presented anti-HCV antibodies by EIA. One hundred and seventy-six of these 193 had HCV-RNA detected by real-time PCR. Furthermore, 166 out of 495 cocaine users were found by EIA to have anti-HIV antibodies. Ninety-eight of these 166 had anti-HCV antibodies detected by EIA, and 81 had HCV-RNA detected by real-time PCR. Using Fisher's Exact Test, several variables associated with HCV and HIV/HCV co-infection were identified: tattoo, shared use of paraphernalia, long-term use of cocaine, unprotected sex, sexual intercourse with another drug user, and more than 20 sexual partners in last 24 months.

CONCLUSIONS

The epidemiological aspects of HCV mono-infection and HCV-HIV co-infection among cocaine users presented here should serve as an incentive for the establishment of a program of prevention and control of infections with HCV and HIV by the local public-health authorities in the eastern Amazon.

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest

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