

## Investigation on infection of hepatitis G virus in 105 cases of drug abusers

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### Abstract

**AIM:** To investigate the infection of hepatitis G virus (HGV) in 105 cases of drug abusers.

**METHODS:** One hundred and five heroin addicts including 85 males and 20 females, aged from 17a to 45a old, mean age  $26.3a \pm 5.8a$  were observed. Duration of the drug abusing was ranged from 5 mo to 168 mo with mean  $37.5 \pm 23.6$  mo. Seventy-five cases accepted the drug by intravenous injection only, 30 others by both intravenous and scalded inhaling ways. All cases had no history of blood transfusion. (1) Detection of HGV-RNA: total RNA was extracted from serum by the acid guanidinium thiocyanate-phenol-ethanol method, the 5' terminal non-coded region of HGV-RNA was amplified by nested reverse transcription-PCR. (2) anti-HAV-IgM, HBsAg, anti-HCV, HDAg, anti-HD, anti-HD-IgM and anti-HEV were detected by

ELISA. Reagents were provided by Shenzhen Moon Bay Biologic Company. (3) Hepatic functions were determined by Hitachi 7510 automatic analyzer.

**RESULTS:** (1) Incidence of HGV infection: 25 (23.8%) of 105 drug abusers, 21 men and 4 women, were infected with HGV. The mean drug taking time of HGV infected cases were  $38.6 \pm 19.9$  mo, it is similar with the mean duration of drug abusing,  $37.7 \pm 24.6$  mo ( $P > 0.05$ ), of those cases without HGV infection. (2) Superinfection of HGV with hepatitis B virus (HBV) or hepatitis C virus (HCV): 26 (24.7%) of 105 addicts were infected with HBV and 68 (64.8%) with HCV. Among 25 cases infected with HGV, 8 (32%) of them were infected with HGV alone, 6 (24.0%) were superinfected with HCV, 2 (8.0%) with HBV and 9 (36.0%) with HCV and HBV. Thus, 17 (68.0%) of 25 cases infected with HGV were superinfected with HCV and/or HBV. (3) Hepatic function tests: The total serum bilirubin levels of all 105 cases were less than  $20 \mu\text{mol/L}$ . The ALT levels of 30 (28.6%) cases were more than 40 U/L and among them, 1 case was infected with HGV only, 1 was superinfected with HGV and HBV, 3 with HGV and HCV, 7 with HGV, HBV and HCV respectively. Meanwhile also among the cases with abnormal increased ALT level, 1 case infected with HBV, 15 with HCV, 2 superinfected with HBV and HCV.

**CONCLUSION:** The results of this investigation reveal that in drug abusers the incidence of viral hepatitis is in the order of HCV, HBV and HGV.

**Key words:** Hepatitis G virus; Heroin dependence; Substance abuse polymerase chain reaction; Serodiagnosis; Hepatitis C virus

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