Abstract

Posttransfusion hepatitis (PTH) is a major problem associated with the use of blood products. With the introduction of sensitive tests to screen blood donors, the risk of PTH has declined but not been eliminated. PTH remains a serious disease with a high chronicity rate. A previous prospective study in Taiwan has revealed a prevalence rate of 12.2% in patients received blood transfusion, and the major cause of PTH is hepatitis C virus (HCV). A total of 11 patients infected with PTH HCV alone developed cirrhosis 2-11 years after transfusion. Cirrhosis was diagnosed by biopsy in one, and by ultrasound plus 99mTC liver scan (EHC>35%) in ten. High viral load and old age seemed to be risk factors for cirrhosis. There was no difference in genotype between patients with or without hepatitis.

To evaluate the association liver cirrhosis and hepatocellular carcinoma with chronic HCV infection, long term follow-up of patients with PTH-C in the previous study were carried out using biochemical tests, serological markers, ？HG\-fetal protein and abdominal ultrasonography. Liver biopsies were suggested in patients without contraindications. We also plan to follow patients infected with 2 new viruses, GBV-C/HGV and TTV.

By nucleic acid amplification test (NAT), hepatitis B virus (HBV) DNA is occasionally detectable in blood donors with past HBV infection but negative for hepatitis B surface antigen (HBsAg). Whether or not these donors can cause hepatitis B infections is uncertain. To address this issue, we studied recipients prospectively followed for blood transfusion in a university medical center in Taiwan. Among 910 recipients who completed a 6-month follow-up after transfusion, there were 39 negative for HBsAg, antibody to HBsAg (anti-HBs), and antibody to hepatitis B core antigen (anti-HBc) ass well as serum HBV DNA by PCR before transfusion. A total of 147 plasma samples of their blood donors were available and tested for HBV DNA by PCR. Eleven of the 147 samples were positive for HBV DNA. In total, 11 patients received these HBV DNA positive donations, and were tested for HBsAg, anti-HBs, anti-HBc, HBV DNA plus hepatitis G virus, hepatitis C virus, and TT virus in serial serum samples before and after transfusion. Two (18%) of the 11 transfused patients became positive for HBV DNA, and one seroconverted to anti-HBc and finally the anti-HBs, with a mild transient elevation of alanine aminotransferase activities. It was deduced that around 200-300 posttransfusion HBV infectious occurred currently with one million units blood transfusion in Taiwan. We conclude that in HBV endemic areas like Taiwan where blood donors are screened for HBsAg only, the risk of transfusion-transmitted hepatitis B appears to be substantial. And thus, implementation of NAT for blood screenings warrants consideration.

Keywords：posttransfusion hepatitis；Hepatitis C；Hepatitis G