Prevalences of HBV and HCV infection in patients undergoing chemotherapy in Taiwan

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Background

Reactivation of Hepatitis B virus (HBV) or Hepatitis C virus (HCV) infection in cancer patients undergoing chemotherapy may cause interruption of chemotherapy and lead to liver failure and death. Currently, the prevalence of HCV infection in patients receiving chemotherapy in Taiwan and the outcome of HCV-infected patients receiving chemotherapy remain unclear.

Aim

To investigate the prevalences of HBV and HCV infection in patients undergoing chemotherapy in Taiwan.

Methods

In our institute, an order entry-based therapeutic control system has been applied to ensure pre-chemotherapy screening of HBV infection and HCV infection by testing HBsAg and anti-HCV antibody since August 2012. In this retrospective cohort study, we reviewed the pre-chemotherapy screening data of newly diagnosed cancer patients registered in our hospital from August 2012 to July 31, 2013. The prevalences of HBV and HCV infections among patients with hepatoma, non-hepatoma solid tumors, and hematological malignancies were compared.

Results

In the study period, 760 of 771 patients (98.6%) undergoing chemotherapy received complete serological tests for HBsAg and anti-HCV antibody. Among the patients with complete tests, the prevalences of HBV infection, HCV infection and co-infection were 16.2%, 4.3% and 0.8%, respectively. The prevalence of HBV infection in patients with hepatoma (n = 55) was significantly higher than that in patients with non-hepatoma solid tumors (n =630) and that in those with hematological malignancies (n = 75) (61.8% vs 9.3% and 14.4%; both $P < 0.001$). There were no differences in the prevalence of HBV infection between patients with non-hepatoma solid tumors and hematological malignancies ($P = 0.377$). Regarding HCV infection, patients with hepatoma had significantly higher HCV infection rate than those with non-hepatoma solid tumors and hematological malignancies (20.0% vs 4.6% and 2.7%; $P < 0.001$ and $P = 0.004$, respectively). No differences in the prevalence of HCV infection between patients with non-hepatoma solid tumors and hematological malignancies existed ($P = 0.691$).

Conclusions

The prevalences of HBV infection and HCV infection in patients receiving chemotherapy in Taiwan are 16.2% and 4.3%, respectively. Hepatoma patients have higher prevalences of HBV infection and HCV infection than those with non-hepatoma solid tumors and hematological malignancies.