HEPATITIS B REACTIVATION IN THE CHRONIC MYELOID LEUKEMIA PATIENT TREATED WITH IMATINIB MESYLATE

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Abstract:

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Introduction: Hepatitis B virus (HBV) reactivation during chemotherapy is a well recognized complication. Because it is often fatal, preemptive administration of entecavir and frequent monitoring of HBV DNA mRNA level are recommended for high risk patients. To date, there are few reports on HBV reactivation by tyrosine kinase inhibitors (TKI). We present the patient with chronic myeloid leukemia (CML) who developed HBV reactivation during imatinib mesylate (IM) therapy.

Case Report: The patient in 70s with a history of colon carcinoma and CML in chronic phase developed mechanical ileus. He had been on IM for 10 years. On preoperative examination, AST/ALT was 350/366 IU/L respectively. Since the liver abnormality could be related to either ischemic tissue damage or drugs, all medications including IM were discontinued. However, in 3 weeks, AST/ALT reached as high as 651/909 IU/L. He became icteric and had mild ascites. Virus serological/molecular test revealed positive results for HBs antigen, HBc antibody and HBV DNA mRNA. Because HBs antigen had been negative 3 years before and HBs antibody was detected on admission, it was indicated that HBV reactivation was responsible for his hepatitis (i.e. ‘de novo’ hepatitis). Entecavir was initiated, which fortunately ameliorated symptoms and normalized laboratory data in a month. HBV DNA mRNA also became undetectable in 2 months. CML has been maintained in complete molecular remission for more than 6 months despite he is off IM.

Discussion: Hepatotoxicity is seen up to 5% of CML patients treated with IM. But HBV reactivation by TKI is a rare event. There have been less than 10 case reports of such patient in literature, and this is the first report of a Japanese patient. Besides BCR/ABL, IM can inhibit other kinase activities on various cell types and has immunomodulatory effects. Considering the potentially fatal nature of hepatitis with HBV reactivation, patients at risk should be closely monitored during TKI treatment.