O1040 Hepatitis B virus reactivation in bone marrow transplant recipients

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Background: Bone marrow transplant recipients with a history of hepatitis B virus (HBV) infection may be subject to reactivation that can have serious consequences. This risk varies between 4.5 and 72% in the literature. The aim of this study is to determine the frequency of HBV reactivation in bone marrow transplant recipients with a history of HBV infection and to identify new cases of post-transplant infection.

Materials/methods: Retrospective study including bone marrow transplant patients at the Pierre and Marie Curie Center. Pre-transplant screening by looking for serological markers of hepatitis B: HBs antigen, anti-HBc, anti-HBs (ELISA or chemiluminescence technique).

Follow-up of post-transplant patients:
- Patients with at least one positive marker: serological and molecular monitoring (by real-time PCR viral load measurement) looking for reactivation
- Seronegative patients: clinical and biological follow-up for the identification of possible new cases of HBV infection.

Results: Our study included 383 patients who received bone marrow transplants following various pathologies, mainly acute leukaemias: acute myeloid leukemia (56%) and acute lymphoid leukemia (17%), but also chronic myeloid leukemia (17%), myelodysplasia (5%) and multiple myeloma (5%). Among these patients, 4% had at least one positive marker in pretransplant: profile of a resolved infection (9 patients), chronic infection (6 patients). Prophylaxis with a specific antiviral (Entecavir or Lamivudine) was initiated in 11 of these patients.

During follow-up 13% (2/15 patients) experienced reactivation:
- a serum reversion with hepatic cytolysis
- a positive viral load at 2.2 log when it was initially negative.

These two patients were not on antiviral medication.

In addition, we observed a resolution of the infection after transplantation in 4/6 of patients with chronic infection. 2/15 patients lost all markers that could indicate a history of HBV infection.

During the follow-up of seronegative patients 0.8% (3/368 patients) developed HBV infection. One of the three patients died of fulminant hepatitis.

Conclusions: Our study highlights the importance of regular virological screening and follow-up. It also shows the importance of antiviral prophylaxis in preventing the reactivation of HBV infection in bone marrow transplant recipients.