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Opinion Article

Lymphoproliferative Diseases in Transplant Patients with Hepatic Conditions

Nianqiao Chen*

Department of Hepatology, Nantes University, Nantes, France

DESCRIPTION

Post-Transplant Lymphoproliferative Disorder (PTLD) is a rare but serious complication that can occur after a liver transplant. It is a condition where the immune system, which is suppressed by anti-rejection drugs, fails to control the growth of lymphocytes, a type of white blood cell. These lymphocytes can become infected with a virus called Epstein-Barr Virus (EBV), which can cause them to multiply abnormally and form tumors in different parts of the body. PTLD can range from benign polyclonal proliferations to malignant monoclonal lymphomas, which are cancers of the lymphatic system. The risk of developing PTLD after a liver transplant depends on several factors, such as the type and dose of immunosuppressive drugs, the presence of EBV infection before or after the transplant, the age and gender of the recipient, and the type and source of the donor organ. According to a study1, the incidence of PTLD after liver transplantation is about 2.5%, with a higher rate in children than in adults. The median time of onset is about 9 months after the transplant, but it can vary from a few weeks to several years.

The symptoms of PTLD can vary depending on the location and extent of the tumors. Some common symptoms include fever, weight loss, night sweats, fatigue, swollen lymph nodes, abdominal pain, jaundice, skin rash, and neurological problems. However, some patients may have no symptoms at all and the diagnosis may be made incidentally by imaging tests or biopsies. The diagnosis of PTLD is based on the clinical presentation, blood tests, imaging studies, and tissue biopsy. Blood tests can show the level of EBV DNA in the blood, which can indicate the activity of the infection and the risk of PTLD. Imaging studies, such as ultrasound, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and Positron Emission Tomography (PET), can help to detect and monitor the tumors. Tissue biopsy is the definitive method to confirm the diagnosis and to determine the type and grade of the lymphoma.

The treatment of PTLD depends on the type, stage, and location of the lymphoma, as well as the general condition of the patient. The objectives of treatment are to reduce the tumor burden, restore the immune balance, and prevent the recurrence of PTLD. This is the first-line treatment for most cases of PTLD, as it can allow the immune system to fight the EBV infection and the lymphoma cells. However, this can also increase the risk of graft rejection and infection, so it should be done carefully and under close monitoring. Antiviral therapy is used as drugs which can inhibit the replication of EBV, such as ganciclovir, acyclovir, and valacyclovir. Antiviral therapy can be used in combination with reduced immunosuppression, especially in patients with high levels of EBV DNA in the blood. Surgery can be used for patients with isolated or life-threatening PTLD, or for patients who have failed other treatments. The prognosis of PTLD after liver transplantation depends on the type, stage, and response to treatment of the lymphoma, as well as the function and survival of the graft. Overall survival rate of PTLD after liver transplantation is about 50%, with a higher rate for early and low-grade PTLD than for late and high-grade PTLD. The risk of recurrence of PTLD after treatment is about 20%, with a higher rate for patients with high levels of EBV DNA in the blood or with graft dysfunction.

CONCLUSION

The prevention of PTLD after liver transplantation involves the optimization of immunosuppression, the screening and treatment of EBV infection, and the monitoring of PTLD risk factors. The immunosuppressive regimen should be tailored to the individual patient, balancing the risk of rejection and infection. The EBV status of the donor and the recipient should be tested before and after the transplant, and prophylactic or preemptive antiviral therapy should be considered for high-risk patients. PTLD is a serious complication that can occur after a liver transplant. It is caused by the uncontrolled growth of lymphocytes infected with EBV, which can form tumors in different parts of the body. The diagnosis and treatment of PTLD require a multidisciplinary approach, involving the transplant team, the hematologist, the oncologist, and the radiologist. The prevention and early detection of PTLD are essential to improve the outcome and quality of life of liver transplant recipients.

Correspondence to: Nianqiao Chen, Department of Hepatology, Nantes University, Nantes, France, E-mail: chen@nat.fr

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