Post-Transplant Lymphoproliferative Disorder (PTLD)

Post-Transplant Lymphoproliferative Disorder (PTLD) is an unusual type of cancer that arises exclusively in transplant recipients, as suggested by its name. It is an expansion of one or more clones of lymphoid cells. It is almost always associated with Epstein-Barr virus (EBV), the same virus that causes infectious mononucleosis or "the kissing disease."

The majority of adults have been exposed to EBV, most commonly in their childhood or teenage years. For these patients, EBV-associated PTLD can develop after transplantation because immunosuppression allows the virus to reactivate. In contrast, many children come to liver transplantation without ever having been exposed to EBV. If patients are exposed to EBV after transplantation and therefore under the influence of immunosuppression, they may be unable to control the infection.

PTLD arises in either scenario when EBV-infected B cells (a subset of lymphocytes) grow and divide in an uncontrolled fashion. As it is fundamentally a result of a compromised immune system, the first line of treatment is simply stopping or substantially reducing immunosuppression. While this approach frequently works, it also risks graft rejection which would then necessitate increased immunosuppression. Recently, a drug that specifically eliminates B cells, the cells infected by EBV, has become available.

Today, a common approach is therefore to give this drug, rituximab, in conjunction with less drastic cuts of the immunosuppression drugs. If this approach does not control PTLD, then more conventional chemotherapy drug regimens typically given to treat lymphomas that develop in non-immunosuppressed patients, are used. The majority of PTLD cases can be successfully treated with preservation of the transplanted organ.