TJC Turkish Journal of Cancer
Volume 36, No.2, 2006

Images in hematology-oncology

KEMAL KÖSEMEHMETOĞLU, AYŞEGÜL ÜNER

Hacettepe University Faculty of Medicine, Department of Pathology, Ankara-Turkey

Lymphadenopathy in a transplant patient

CLINICAL HISTORY

Two axillary lymph nodes of 1 cm diameter from a 28 year old female were sent for consultation. Her past medical history was significant for allogeneic bone marrow stem cell transplantation for aplastic anemia. She was on the 85th day of transplantation when the lymph node enlargement was noted.

Microscopic examination revealed a diffuse infiltration of plasma cells and small lymphocytes effacing the normal architecture of the lymph node (Figure 1). Necrosis and atypical cells were not present. Immunohistochemical studies highlighted residual B cell regions, expanded paracortical zones and plasma cell infiltration (Figure 2). Plasma cell infiltration was found to be polyclonal with immunohistochemical staining (kappa and lambda) (Figure 3).

What is your diagnosis?

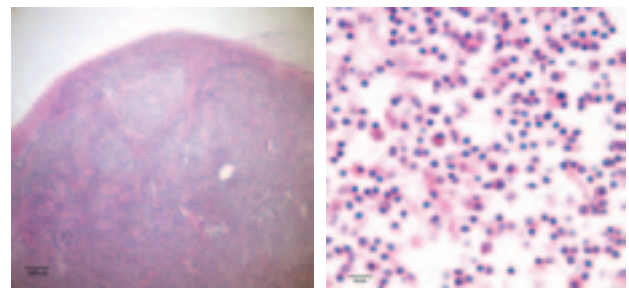

Fig 1. Low power magnification shows the effacement of the lymph node architecture with expansion of the interfollicular areas with plasma cells and lymphocytes, which is clearly seen in closer view

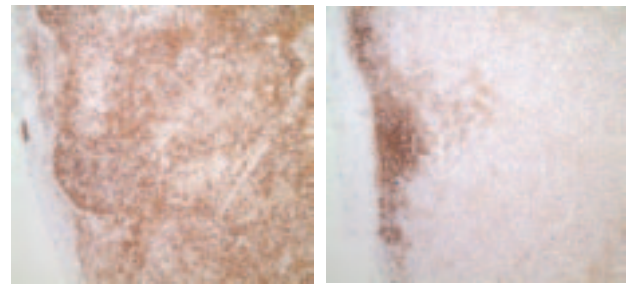

Fig 2. Compressed CD20 positive germinal centers (right) and expanded CD3 positive paracortical regions (left). Notice that most of the cells in the paracortical area are not staining with CD3 or CD20

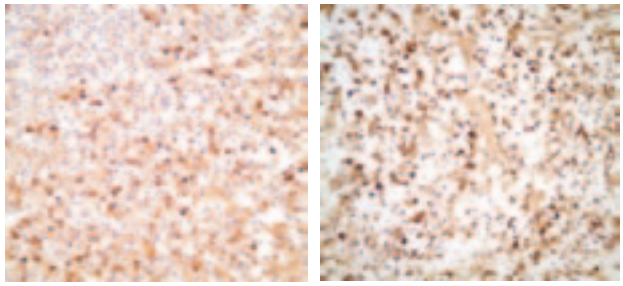

Fig 3. Immunohistochemically, kappa (left) and lambda (right) demonstrated polyclonal staining pattern in plasma cells. EBV PCR was positive in blood sample and EBV positivity was shown immunohistochemically by anti-EBV nuclear antigen (Figure 4)

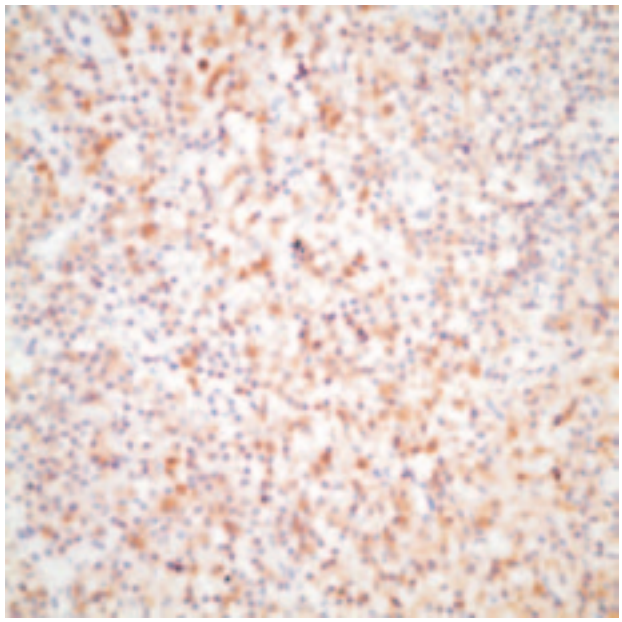

Fig 4. EBV nuclear antigen positivity shown immunohistochemically

PATHOLOGIC DIAGNOSIS

Post-transplant lymphoproliferative disorder, reactive plasmacytic hyperplasia.

DISCUSSION

Post-transplant lymphoproliferative disorder, as the name implies, is a heterogeneous group of lymphoid proliferations in the setting of immunosuppression in transplant patients. The Society of Haematopathology has classified these diverse lymphoproliferative disorders into hyperplastic, polymorphic and monomorphic (lymphomatous) PTLD groups. Reactive plasmacytic hyperplasia is regarded as early lesion of PTLD and is included in the hyperplastic PTLD together with “infectious mononucleosis” and “atypical lymphoid hyperplasia with architectural retention”. EBV virus is accused as an etiologic factor in majority of the PTLD. Lymph nodes and Waldeyer ring are involved. Morphologically, lymph node shows interfollicular hyperplasia composed of polyclonal plasma cell proliferation. This growth may contain one or several minor clonal subpopulations. The presence of EBV can be shown both immunohistochemically or by in situ hybridisation. These lesions usually regress following reduction of immunosuppressive therapy, but one should be aware that these rapidly proliferative lesions may behave in an aggressive fashion and result in death.

References

1. Jaffe ES, Harris NL, Stein H, Vardiman JW, editors. World Health Organization Classification of Tumours. Pathology and Genetics of Tumours of Haematopoietic and Lymphoid Tissues. Lyon: IARC Pres, 2001.
2. Nalesnik MA. The diverse pathology of post-transplant lymphoproliferative disorders: the importance of a standardized approach. Transpl Infect Dis 2001;3:88-96.
3. Ziarkiewicz-Wroblewska B, Gornicka B, Suleiman W, et al. Posttransplant lymphoproliferative disorder: morphological picture and diagnostic difficulties. Transpl Proc 2006;38:168-72.