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Cutaneous lesions and multiple lymphadenopathies in a 25-years old male

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CLINICAL HISTORY

25-years old male patient was admitted with multiple lymphadenopathies and skin lesions to the Hacettepe University Hospital. Blood sedimentation rate was 82 mm/h (0-20) and β2-microglobulin serum level was elevated, 2313 ng/mL (1010-1730). Abdomen and thorax computerized tomography (CT) scans were done. Paraaortic, mesenteric and mediastinal multiple lymphadenopathies were detected. Biopsy from bone marrow was normocellular without involvement with neoplastic infiltration. Subsequently, skin punch biopsy of skin lesions and lymph node biopsy from inguinal lymph node were performed.

PATHOLOGY

The microscopic examination of skin punch biopsy showed dermal and subcutaneous tissues infiltrated with neoplastic cells which displayed small to medium-sized cells with fine chromatin and scant cytoplasm and frequent mitotic /apoptotic figures. Epidermis was intact. Immunohistochemical studies revealed that these neoplastic cells were diffusely positive with CD2, CD8, focally positive with CD5 and terminal transferase (TdT) (Figure 1).

In the lymph node biopsy sections, normal architecture was effaced due to diffuse infiltration with monotonous population of cells with starry-sky pattern. Touch imprint showed cytological details of blastic cells. Immunohistochemical studies showed membraneous CD2, nuclear TdT and high Ki-67 labelling (Figure 2).

What is your diagnosis?

PATHOLOGIC DIAGNOSIS

Precursor T-lymphoblastic leukaemia/lymphoma, skin and lymph node.

DISCUSSION

Skin can be involved primarily or secondarily with lymphoma. Involvement of the skin with precursor T-lymphoblastic leukaemia/lymphoma is very rare. Most cases are seen during childhood and young adulthood. Skin involvement by precursor B-lymphoblastic leukemia/lymphoma is more common than T-cell type.

Typically, dermis is involved with monotonous blastic cells with fine chromatin and scant cytoplasm. The epidermis is uninvolved, with distinct Grenz zone. There is lack of inflammatory reaction. The tumor cells express TdT, CD99, and variably CD1a, CD2, CD3, CD4, CD5, CD8. Phenotype reflects stages in the maturation of a thymic T-cells. Rearrangement of T-cell receptor genes is usually present. Cutaneous involvement is not considered a poor prognostic factor. Systemic multiagent chemotherapy can cure the disease, but T-cell type lymphoblastic lymphoma has worse prognosis than B-cell type.

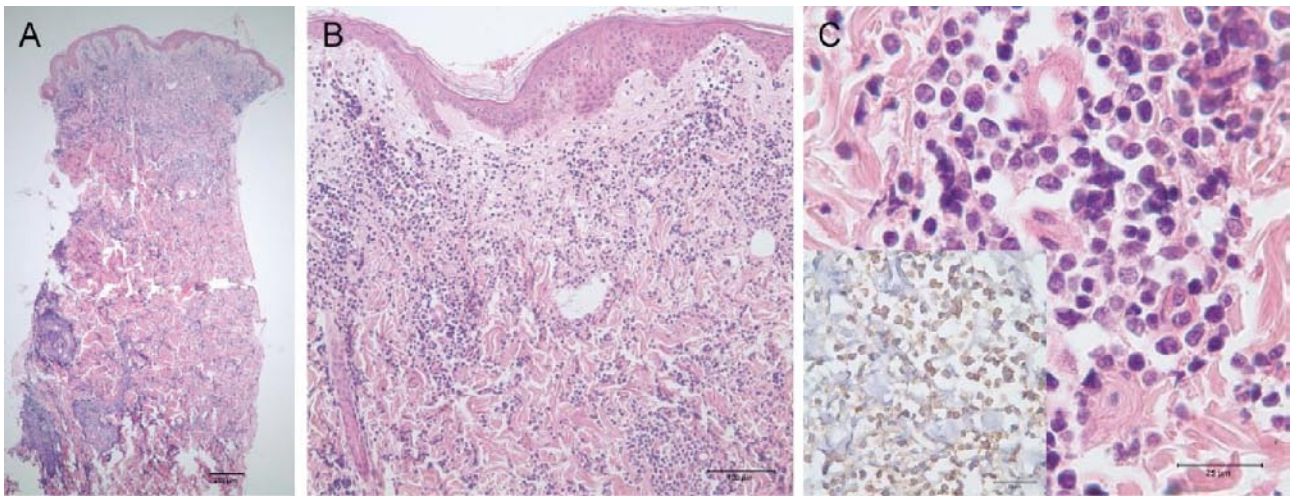

Figure 1 (A&B&C). Skin punch biopsy. (A): Blastic infiltration in superficial and deep dermis in the H&E sections, (B): Epidermis is not involved by blastic infiltrate, (C): Monotonous neoplastic cells among dermal collagen and CD2 expression (insert)

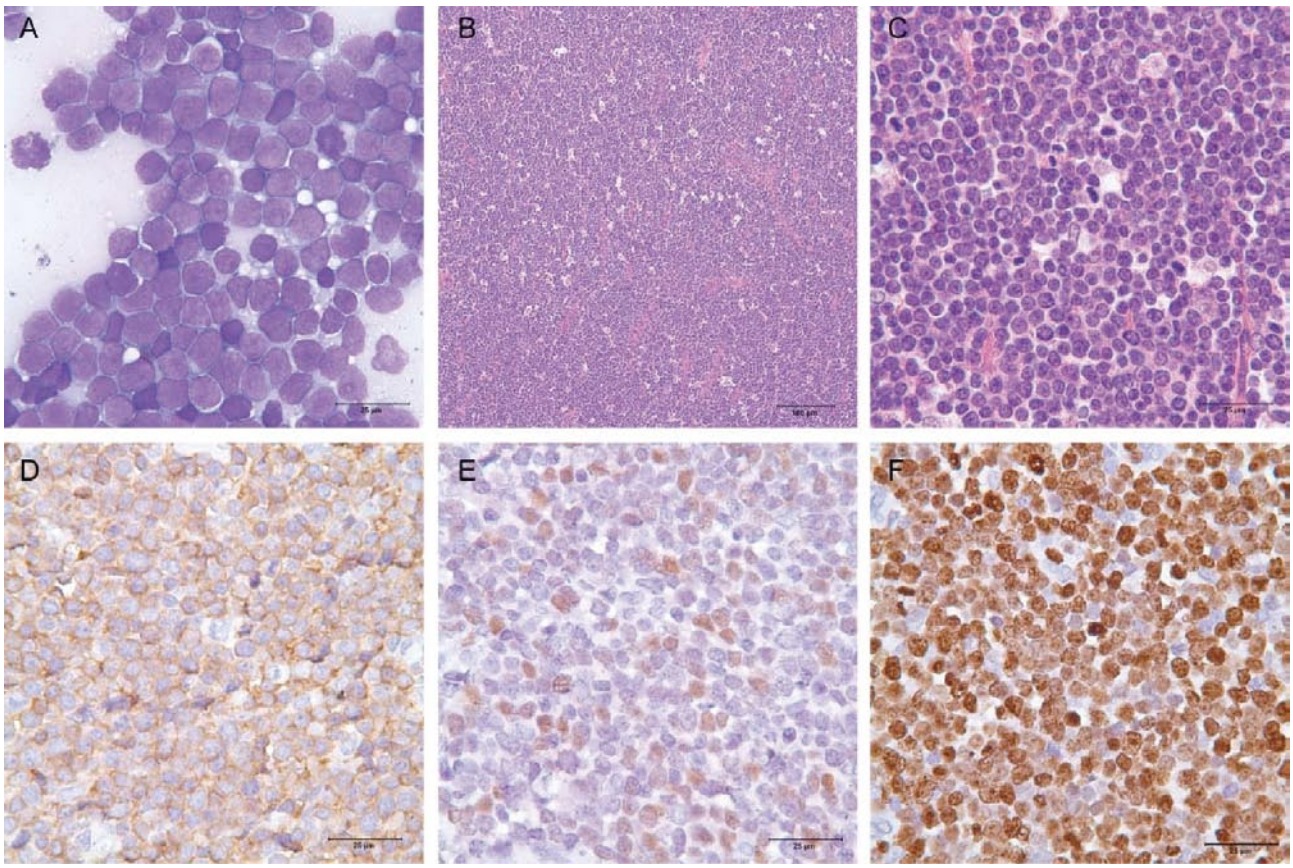

Figure 2 (A-F). Lymph node biopsy. (A): Touch imprints show blastic cells, (B&C): H&E staining demonstrates diffuse blastic infiltration in the lymph node, (D-F): Immunohistochemical staining shows membranous CD2, nuclear TdT, and Ki-67 positivity, respectively

References

1. Jaffe ES, Harris NL, Stein H, et al., editors. WHO Classification of Tumors: Tumors of Haematopoietic and Lymphoid Tissues. Lyon: IARC Press, 2001.
2. Chimenti S, Fink-Puches R, Peris K, et al. Cutaneous involvement in lymphoblastic lymphoma. J Cutan Pathol 1999;26:379-85.