B-Cell Lymphoma Presenting with Extensive Cutaneous Involvement

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ABSTRACT

Cutaneous lymphomas tend to be of T-cell origin, less commonly of B-cell origin. We report a 68-year-old male patient suffering from extensive cutaneous nodules which were found to be B-cell large cell lymphoma in nature. Our case is a good example to unexpected cutaneous involvement of diffuse large cell lymphomas. It may be debated whether it is a primary cutaneous lymphoma or cutaneous involvement of a systemic lymphoma. The case differs from other primary cutaneous lymphomas in the clinical course and in the pathologic and immunohistochemical features. Systemic B-cell lymphomas may also involve the skin. We think that our case demands attention because systemic B-cell lymphomas with such a great skin involvement is not reported in the literature before.

Key Words: Lymphoma, Large-Cell, B-Cell.

ÖZET

Yaygın Cilt Tutulumu ile Gelen B-Hücreli Lenfoma

Kütanöz lenfomalar genellikle T-lenfositlerinden köken alır. Daha nadir olarak B-hücre kökenlidirler. Hastanemize yaygın deri ve deri altı nodülleri ile başvuran 68 yaşında erkek bir hastanın patolojik olarak B-hücreli lenfoma olduğunu belirledik. Difüz büyük hücreli lenfomaların beklenmedik deri tutulumunun bir örneği olarak ilgi çeken vakamız aynı zamanda primer kütanöz lenfomalardan da klinik seyir, patolojik ve immünhistokimyasal özellikleri açısından da farklılık göstermektedir. Literatürde bu derece dermal tutulum gösteren sistemik B-hücreli lenfoma bulunmadığı için dikkat çeken bir olgu olduğunu düşünmekteyiz.

Anahtar Kelimeler: Büyük hücreli lenfoma, B-hücre.

Turk J Haematol 2003;20(4): 241-245

Received: *24.03.2003* ***Accepted:*** *30.06.2003*

A CASE REPORT

A 68-years-old male patient presented to our city hospital with extensive skin lesions of 7 months' duration. He had previously been admitted to another hospital in April, 2000 and diagnosed as mixed type B-cell lymphoma with cutaneous involvement; there he had been treated with one session of cyclophosphamide, vincristine, and prednisone. At admission to our hospital his physical examination was remarkable. His eyes were shut because of the nodules over palpebrae. Large nodules, which were pink-red in colour and hard in consistency, covered the whole face (Figure 1). They varied in size, reaching maximally about 5 cm in diameter. Similar nodules lied over the trunk and four extremities resulting in bilateral nonpitting edema (Figure 2). Uvula had been grown large enough to cause stridor and difficulty in swallowing. Multiple lymphadenomegaly were palpated in the cervical, inguinal, axillary, and occipital regions. Radiologic studies revealed the disseminated nature of the disease. On the cervical computed tomography (CT) bilateral extensive cutaneous and subcutaneous soft tissue lumps, more prominent at the left side, were compressing the neighbouring parotis, submandibular, and thyroid glands. On the left side a soft tissue lump involving cord vocalis was noticed elevating left thyroid cartilage lamina. Packs of lymph nodes indentated the air column of trachea. In thorax CT prevascular, aorticopulmonary, and pretracheal multiple lymph nodes were visualised. Anterior wall of thorax was thickened with cutaneous and subcutaneous tissue and nodular soft tissue as well. Hepatosplenomegaly was detected by ultrasonography (liver approaching the upper limit in size and craniocaudal length of spleen increased to 18 cm). In abdominal CT multiple coeliac, paraaortic, aortocaval, bilateral obturatory, left external iliac, and bilateral inguinal lymphadenomegaly packages were observed. The wall of vesica urinaria was diffusely thickened. He had a pathologic fracture over the distal third of the left cruris.

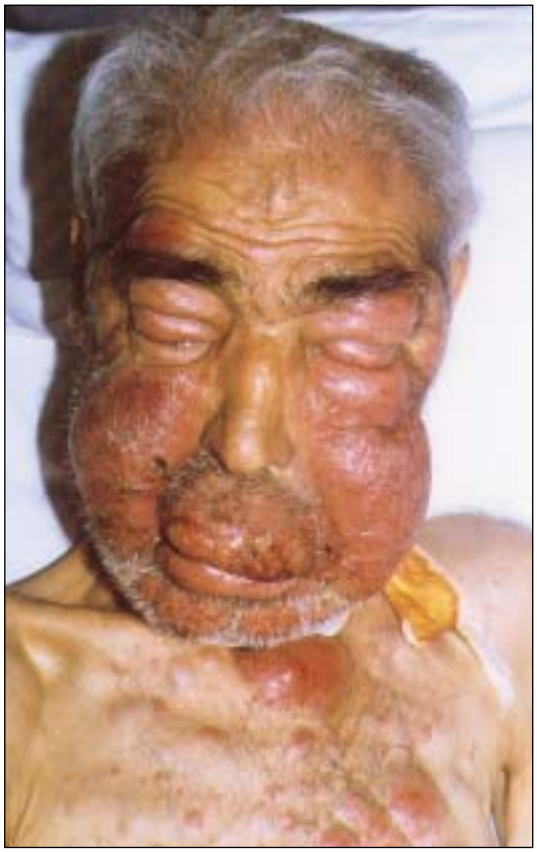

Figure 1. The 68-years-old male patient with extensive facial involvement.

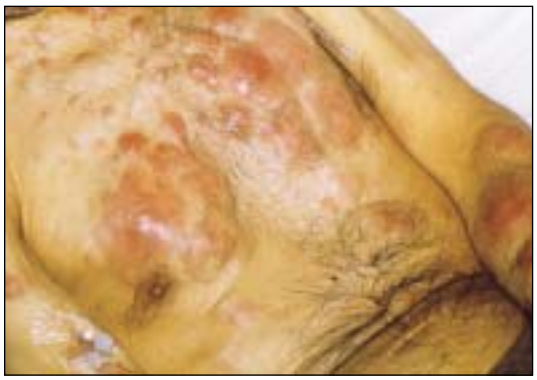

Figure 2. Body of the same patient covered with nodules.

Haemoglobin (Hb) 89 g/L, aspartate aminotransferase (AST) 72 U/L, uric acid 707.8 µmol/L (11.9 mg/dL), and lactic dehydrogenase (LDH) 713 U/L were measured. Other

biochemical values and blood cell counts were normal. Anti-HBs, anti-HBc IgG, and anti-HBe were found positive. Axillary lymph nodes biopsy yielded diffuse non-Hodgkin large cell lymphoma (Figure 3). Biopsy from skin revealed large cell, B-cell cutaneous lymphoma; immunohistochemically LCA (+), CD20 (+), UCHL-1 (-), CD30 (-) (Figure 4,5). Hypercellular bone marrow (70%) with focal mononuclear cell infiltration was found in bone marrow biopsy (Figure 6,7). Mentioned infiltration was compatible with large cell lymphoma. No cytogenetic and flowcytometric studies could be made because of inavailability.

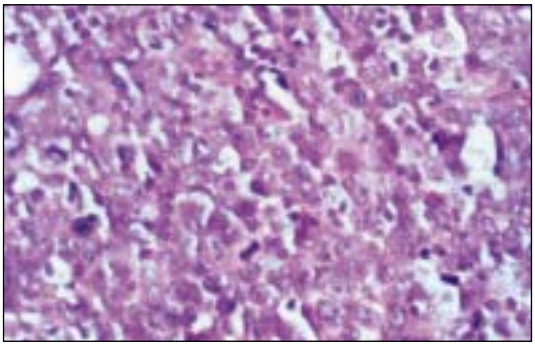

Figure 3. Diffuse neoplastic lymphoid cell infiltration beginning immediately below epidermis (HE, x 220).

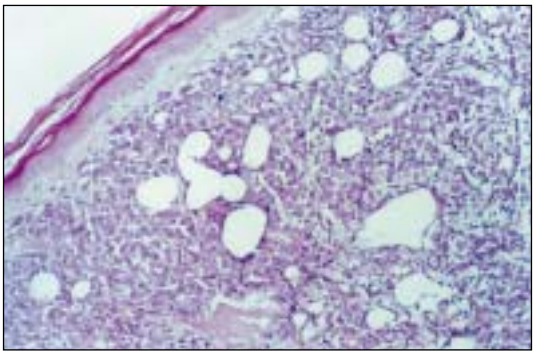

Figure 4. Diffuse L-26 (CD20) positivity in cutaneous infiltration (DAB, x 440).

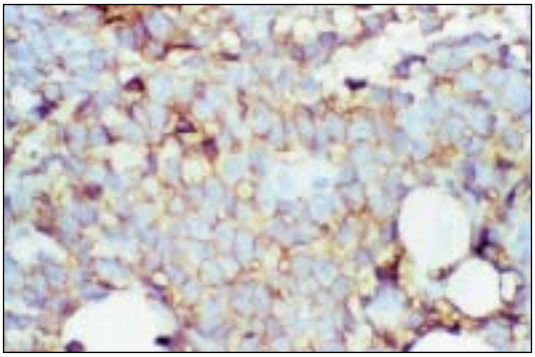

Figure 5. Diffuse neoplastic lymphoid infiltration in lymph node (HE, x 440).

On the 16th day of admission parenteral chemotherapy [cyclophosphamide (750 mg/m^2 day 1), vincristine (1.4 mg/m^2 day 1), adriamycine (40 mg, day 1), methylprednisolone 80 mg/m^2 day 1,2,3,4,5)] was started. Palliative radiotherapy or operation was not considered. On the 3rd day of chemotherapy he had pancytopenia (platelets 88 X 10^9/L, Hb 48 g/L, white blood cell count 14 X 10^9/L, neutrophils 0.7 X 10^9/L), and neutropenic fever. Despite a purulent lesion over the upper lip, no source of infection was detected. Though 3 samples of hemoculture were negative, swab of the aforementioned lesion yielded *Acinetobacter* spp. He succem-

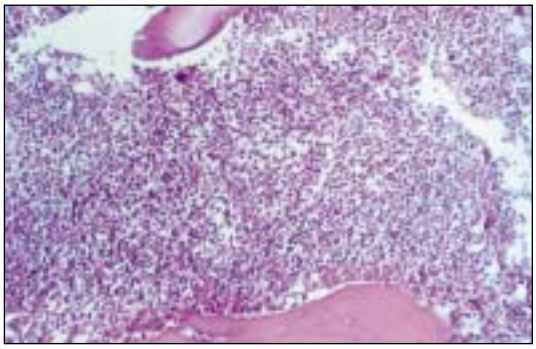

Figure 6. Diffuse neoplastic lymphoid infiltration in bone marrow (HE, x 220).

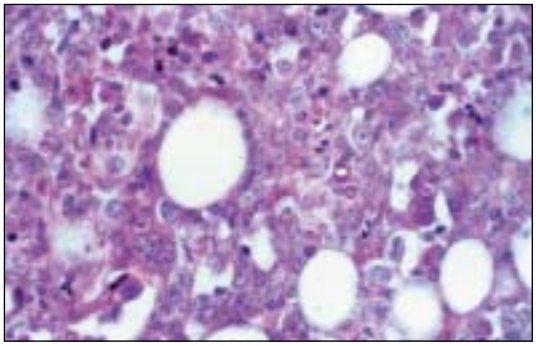

Figure 7. Diffuse neoplastic lymphoid infiltration in bone marrow (HE, x 440).

bed to death on the 4th day of therapy due to *Acinetobacter* sepsis.

DISCUSSION

Cutaneous lymphomas tend to be of T-cell origin. Less commonly B-cell is the origin. Lymphomas may involve the skin primarily or as a component of systemic lymphoma. According to European Organization for Research and Treatment of Cancer (EORTC) classification system, primary cutaneous lymphomas are diagnosed if there is neither visceral nor nodal involvement at the time of diagnosis and within 6 months afterwards[1].

Our patient had systemic B-cell lymphoma confirmed morphologically and immunohistochemically. The widespread nature of the disease (bone marrow involvement, multiple lymphadenopathies in the thorax and abdomen, hepatosplenomegaly) and duration of complaints suggested systemic lypmhoma. Since such an extensive skin involvement is unusual with systemic lymphoma, it still demands debate whether it was a primary cutaneous lymphoma or cutaneous extension of a systemic lymphoma. Even if we assume the case as a primary skin lymphoma, it is very hard to decide which type and which clinical form it is. Hembury et al reported 15 primary cutaneous diffuse large B-cell lymphoma cases involving the lower or upper extremities, head-neck or trunk. All but one followed an indolent and relapsing course[2]. Amo et al reported a diffuse large B-cell lymphoma case with cranial nerve palsies preceding the cutaneous lesions. But cutaneous extension was very limited in that report[3]. Primary cutaneous large B-cell lymphoma (PCLBCL) of the leg is an intermediate clinical form described in the EORTC classification system. It is characterized by the common involvement of the lower extremities and a number of 1-3 lesions[4]. Lesions may be observed over the trunk and head-neck in addition to the lower extremities. Radiation therapy is reserved to solitary lesions while more aggressive systemic chemotherapy is warrented for the rest. Multiple lesions with or without extracutaneous involvement follow a more aggressive course. Bekkenk et al reported 5 PCLBCL cases succembed to death after either radiotherapy or chemotherapy[5]. Our case differed from this subtype with its more wide extension throughout the body and involvement of the extracutaenous sites within shorter than 6 months. Prognosis was dismal as well.

Our case differed from primary cutaneous follicular center cell lymphomas and primary cutaneous immunocytomas, which are accepted as indolent forms according to EORTC classification system, in CD20 positivity[6]. Clinical deterioration and progression was observed despite a course of chemotherapy in contrast to the good prognosis of these subtypes described in the EORTC classification system.

Another subtype named anaplastic large cell lymphoma can present as systemic lymphoma with widespread skin changes. These are found to be positive for CD30[7]. Our patient's histologic picture and immunophenotype differed from this type too.

A subtype of large B-cell lymphomas, named intravascular large B-cell lymphoma resembles our case clinically. Intravascular large B-cell lymphomas are aggressive. Skin lesions of this entity commonly involve the trunk and the lower extremities. Although the clinical course followed intravascular B-cell lymphoma, the pathologic appearance was different.

Advanced age and increased LDH are poor prognostic markers in PCLBCL of the leg[8]. We think that the same factors contributed to the drastic outcome of our case. In conclusion our case was a good example to unexpected widespread cutaneous involvement of aggressive diffuse large cell lymphomas.

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