Indurated Plaques on the Legs: Think Lymphoma

Dear Editor,

Primary cutaneous diffuse large B-cell lymphoma, leg-type (PCDLBCL-LT) is a rare and aggressive neoplasm. A timely diagnosis may prevent fatal outcomes; physicians should take this entity into consideration when assessing non-specific lesions on the lower limbs. We present a 69-year-old woman with a 1-month history of a firm plaque on her left leg. Physical examination revealed an asymptomatic, indurated, smooth, and erythematous plaque on the pretibial region of her left extremity (Figure 1, a). The rest of the physical examination was normal. Histological examination revealed cohesive sheets of a dense cell infiltrate in the dermis, composed of large round immunoblast-type cells with prominent nucleoli, and the presence of mitoses. Immunohistochemical stains were positive for CD20, Bcl2, and MUM1 (Figure 1, b-d). Additionally, c-MYC and Ki67 exhibited a 20% positivity; CD3 and CD10 were negative. The diagnosis of PCDLBCL-LT was established. Imaging and blood workup ruled out systemic involvement. Treatment with R-CHOP chemotherapy was initiated, with complete tumor regression by the third cycle. The patient completed 6 cycles and has remained disease-free after 18 months. Primary cutaneous B-cell lymphomas (CBCL) are lymphoproliferative disorders that appear on the skin without

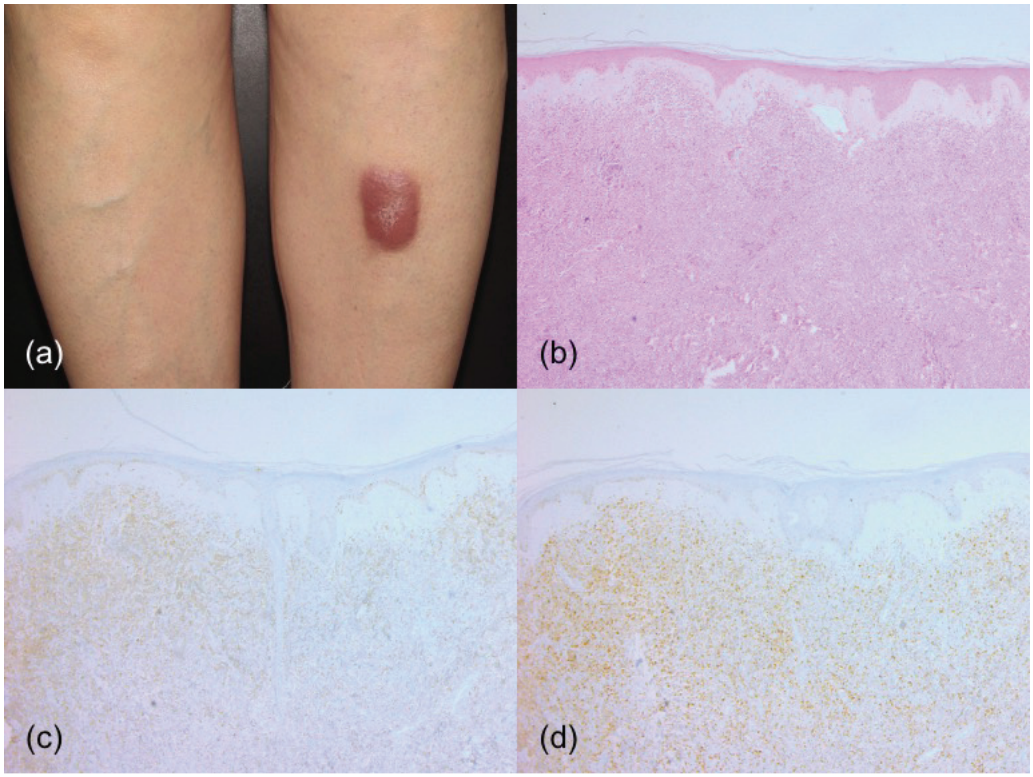

Figure 1. (a) A firm indurated erythematous plaque with a smooth surface located on the left lower extremity. 6 × 4.5 cm. (b) Hematoxylin and eosin (×10). Dermis occupied by cohesive sheets of dense diffuse infiltrate of large round immunoblast-type cells with prominent nucleoli. (c) Immunoperoxidase stains (×10) for Bcl2+, and (d) MUM1+.

evidence of extracutaneous manifestations at the time of diagnosis (1). They represent 25 to 35% of all primary cutaneous lymphomas (2). In 2018, an updated version of the 2008 WHO-EORTC classification divided CBCLs into 5 subtypes: PCDLBCL-LT, primary cutaneous marginal zone B-cell lymphoma (PCMZL), primary cutaneous follicle center lymphoma (PCFCL), Epstein-Barr virus-positive mucocutaneous ulcer (EBVMCU), and intravascular large B-cell lymphoma (3). PCDLBCL-LT is the least common subtype, representing approximately 10% of all CBCLs and only 4% of all cutaneous lymphomas (2,3). Although the pathogenesis for most CBCLs is still unknown, positive serology for Lyme disease in a significant number of patients has been recognized as a probable etiologic association (4). PCDLBCL-LT is more frequent in women, and the mean age of presentation is 76 years. It usually presents as erythematous or bluish nodules, and up to 75% of the cases appears on one or both legs (1). Although infrequent, other locations have been reported, including the head, neck, trunk, and upper extremities (5). Workup should include a complete physical exam, skin biopsy, blood tests, and imaging (2,3). Histopathology shows a diffuse infiltrate in the dermis composed of large B-cells (centroblasts and/or immunoblasts) with extension to subcutaneous cellular tissue. These cells have round nuclei that are more than twice the size of normal lymphocytes, with prominent nucleoli. The immunophenotype of PCDLBCL-LT is CD20+, CD79a+, CD10-, and Bcl-6+/-, and strongly expresses Bcl-2, MUM1/IRF4, and FOX-P1 (1-3). Unlike the other indolent subtypes, PCDLBCL-LT is generally more aggressive with a poor prognosis. The 5-year disease survival rate is of approximately 50% (5). Management depends on the body surface area, location, and the patient's age and general health. To date, chemotherapy with R-CHOP remains the first line of therapy for PCDLBCL-LT, resulting in complete remission in up to 92% of cases (2). The prognostic characteristics of most PCDLBCL-LTs require timely and appropriate diagnosis and treatment.

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