QUIZ SECTION

MJS PUBLISHING

Skin Erosion on the Nasal Root with Marked Right Eyelid Swelling: A Quiz

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A 78-year-old man with no prior medical history, including herpes zoster, presented with an ulcerative lesion on the nasal root and marked swelling of the right eyelid. Given the unilateral skin erosion, herpes zoster was suspected, and oral valacyclovir was initiated along with topical gentamicin sulphate applied to the affected area. However, after 2 weeks of treatment, there was no improvement in the skin lesion (Fig. 1). Visual fields, visual acuity, and extraocular movements were intact, and no abnormalities were observed on cranial nerve examination. The patient also reported no pruritus or pain. Laboratory tests showed normal C-reactive protein levels, and no blasts were detected in the peripheral blood. Serological tests for varicella zoster virus IgM and herpes simplex virus IgM were negative. Computed tomography revealed an irregular mass extending from the orbit to the nasal root (Fig. 2).

What is your diagnosis?

1: Diffuse large B-cell lymphoma
2: Metastatic tumour
3: Actinic keratosis
4: Squamous cell carcinoma

See next page for answer.

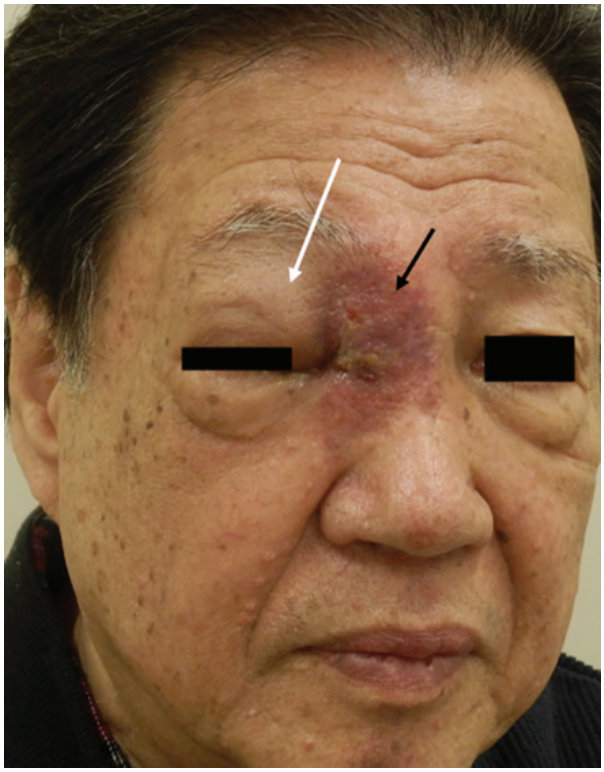

Fig. 1. Clinical photograph. Physical examination revealed an ulcerated lesion on the nasal root (black arrow) and marked swelling of the right upper eyelid without pain (white arrow). Written informed consent has been obtained from the patient to publish this photo.

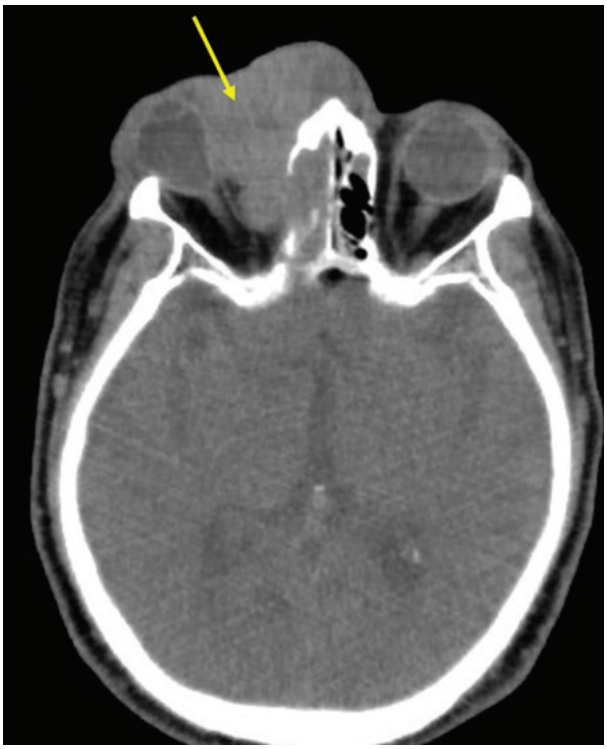

Fig. 2. Computed tomography revealed an irregular mass extending from the right forehead to the nasal root, involving the right eyelid, medial orbit, and ethmoid sinus (yellow arrow).

ANSWERS TO QUIZ

Skin Erosion on the Nasal Root with Marked Right Eyelid Swelling: A Commentary

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Diagnosis: **Diffuse large B-cell lymphoma**

Diffuse large B-cell lymphoma (DLBCL) is a heterogeneous disease with variable molecular backgrounds, clinical courses, and treatment responses, and is classified as an intermediate- to high-grade B-cell lymphoma. Up to one-third of DLBCL cases arise from extranodal sites such as the gastrointestinal tract, skin, bone, or genitourinary organs. In advanced stages, the disease may metastasize to the bone marrow or central nervous system (CNS), sometimes making it difficult to identify the primary site (1). Among orbital tumours, lymphomas account for 50–70%, but DLBCL comprises less than 10% of these cases (2). Orbital DLBCL typically presents as a painless, unilateral or bilateral mass. In advanced stages such as stage IV, metastasis to the bone marrow or CNS is associated with a poor prognosis. Prognostic factors include age at diagnosis, absence of chemotherapy or radiotherapy, and tumour stage (3, 4). The diagnosis of DLBCL is based on histopathological and immunohistochemical findings, characterized by diffuse proliferation of large B-cells and positivity for B-cell markers such as CD20 and CD79a. Treatment is determined based on age and prognostic factors, with chemoimmunotherapy regimens such as the combination therapy of rituximab, cyclophosphamide, doxorubicin, oncovin, and prednisone (R-CHOP), being the standard of care (5). DLBCL showing the co-expression of MYC and Bcl2, known as "double-expressor" lymphomas, are associated with poorer outcomes (6).

Histopathological findings taken from the eroded area showed diffuse infiltration of atypical lymphocytes with follicular destruction and nuclear atypia involving the entire dermis and subcutaneous fat (Fig. 3A). Immunohistochemical staining demonstrated positivity for CD20, CD79a, MUM1, and Bcl-2, and negativity for cytokeratin, CD3, and CD5 (Fig. 3B–D). There was no evidence of atypical cell proliferation in the epidermis, no solar elastosis, and cytokeratin was negative, ruling out actinic keratosis and squamous cell carcinoma. Additionally, MYC was positive in more than 40% of cells, confirming the case as a double-expressor DLBCL with poor prognosis. Further imaging revealed cervical lymphadenopathy and granular opacities in the lungs, suggestive of DLBCL metastases. No primary lesion was detected in internal organs, and metastasis from a visceral carcinoma was excluded. Based on these findings, the patient was diagnosed with stage IV-A DLBCL. The combination chemotherapy with polatuzumab vedotin, rituximab, cyclophosphamide, doxorubicin, and prednisone (Pola-R-CHP) was initiated by the haematology department and is currently ongoing.

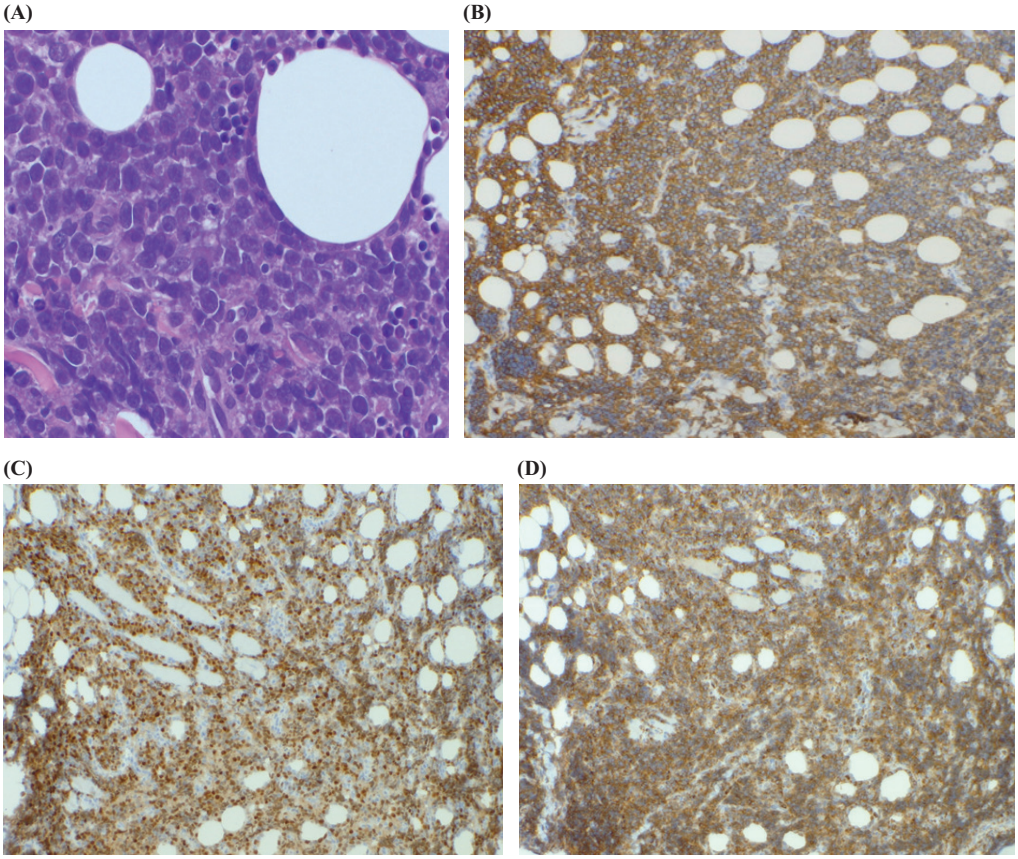

Fig. 3. Histopathological findings on the lesion. (A) Histopathological examination revealed diffuse infiltration of medium- to large-sized atypical lymphocytes, irregular nuclear contours, increased chromatin, and prominent nucleoli, which disrupted the follicular architecture (haematoxylin and eosin staining x400). (B) The atypical cells proliferating in the dermis were positive for CD20 (x100). (C) The atypical cells proliferating in the dermis were positive for MUM1 (x100). (D) The atypical cells proliferating in the dermis were positive for Bcl-2 (x100).

Furthermore, as in our case, orbital DLBCL has been reported to infiltrate the periorbital skin, presenting with cutaneous manifestations (7). There are also reports of DLBCL arising in the same region as previously affected by herpes zoster (8). This phenomenon is known as Wolf's isotopic response, in which various skin disorders such as granuloma annulare, pseudolymphoma, sarcoidal granuloma, tuberculoid granuloma, and Kaposi sarcoma develop in the same dermatomal distribution as prior herpes zoster-infected lesions. It is hypothesized that local immune suppression caused by herpes zoster may promote the development or spread of malignancies. This may involve tumour cell accumulation in areas of reduced resistance (locus minoris resistentiae) or Koebner-like phenomena (9). Additionally, cases have been reported in which persistent herpes zoster-like eruptions were eventually diagnosed as T-cell lymphoma, referred to as herpes zoster-like T-cell lymphoma (10).

This case highlights that orbital DLBCL with cutaneous involvement can clinically mimic herpes zoster. Therefore, in cases where suspected herpes zoster lesions persist or do not respond adequately to standard antiviral therapy, a reassessment of the diagnosis should be considered. Given the poor prognosis of advanced-stage orbital DLBCL, early recognition and referral to haematology or other appropriate specialties is essential for timely diagnosis and treatment.

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