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Dermatology

Solitary Facial Nodule Revealing Primary Cutaneous Follicle Center Lymphoma: Dermoscopic Clues and Bcl-2 Positivity

N. Er-rachdy[1*], O. Essadeq[1], M. Meziane[1], L. Benzekri[1]

[1]Department of Dermatology, Ibn Sina University Hospital, Mohammed V University, Rabat, Morocco

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***Corresponding author:** N. Er-rachdy
Department of Dermatology, Ibn Sina University Hospital, Mohammed V University, Rabat, Morocco

Abstract | **Case Report**

Introduction: Primary cutaneous follicle center lymphoma (PCFCL) is the most frequent subtype of cutaneous B-cell lymphomas, typically presenting as slow-growing nodules on the face or scalp. Dermoscopy and immunohistochemistry, particularly Bcl-2 expression, play an important role in diagnosis and prognosis. ***Case Presentation***: We report a 51-year-old woman with a solitary, painless, erythematous nodule on the left cheek. Dermoscopy revealed a pink-salmon background, irregular linear vessels, rosettes, and chrysalis structures. Histology confirmed PCFCL with Bcl-2 positivity and a Ki-67 index of 30%. Staging ruled out systemic involvement. The lesion was excised, and the patient remains under follow-up. ***Discussion***: This case highlights a classic clinical and dermoscopic presentation of PCFCL, emphasizing the role of dermoscopy in early suspicion. The expression of Bcl-2, present in approximately one-third of PCFCL cases, may be associated with an increased risk of cutaneous relapse, underlining the need for long-term dermatologic monitoring. ***Conclusion***: In patients presenting with solitary facial nodules, PCFCL should be considered in the differential diagnosis. Dermoscopy offers useful orientation, and Bcl-2 expression may guide the intensity of follow-up. Early recognition and conservative skin-directed treatment ensure excellent outcomes.

Keywords: Primary Cutaneous Follicle Center Lymphoma, PCFCL, Dermoscopy, Bcl-2, Facial Nodule, Skin Lymphoma, Cutaneous B-cell Lymphoma.

INTRODUCTION

Primary cutaneous follicle-center lymphoma (PCFCL) is the most common subtype of primary cutaneous B-cell lymphomas (PCBCL), accounting for roughly 25 % of cases. It usually affects adults in the fifth to seventh decades and presents as indolent pink-to-violaceous papules, nodules or plaques, preferentially on the head and neck [1]. Dermoscopy, although not diagnostic, often reveals a salmon-colored background with serpentine or arborising vessels and white structureless (chrysalis) areas—clues that help distinguish PCBCL from clinically similar entities such as basal-cell carcinoma or cutaneous metastasis [2]. Early recognition is essential because localized PCFCL is curable with skin-directed therapy and carries an excellent five-year survival exceeding 95 % [1]. We report a case of PCFCL with positive bcl-2 expression.

CASE PRESENTATION

We report the case of a 51-year-old woman fair-skinned with a known history of metastatic right breast cancer diagnosed in 2017 and currently undergoing chemotherapy. She presented with a solitary, erythematous, elevated, and painless lesion on the left cheek, evolving over 25 days (Figure 1). No other cutaneous lesions or palpable lymphadenopathy were noted on clinical examination. Dermoscopic evaluation revealed irregular linear vessels, a homogeneous pink-salmon background, follicular plugs, rosettes, and chrysalis structures (Figure 2). The lesion was surgically excised, and histopathological examination revealed a nodular lymphoid tumor proliferation infiltrating the dermis, with a periadnexal distribution of neoplastic lymphocytes. The infiltrate was predominantly composed of centrocytes, with fewer centroblasts and immunoblasts (Figure 3). Immunohistochemical staining showed strong positivity for CD20 and Bcl-2, with a Ki-67 proliferation index estimated at 30%. These features are consistent with a diagnosis of primary cutaneous centrofollicular B-cell lymphoma. A systemic extension workup revealed no evidence of extracutaneous involvement. After 20 months of follow-up, no recurrence or systemic involvement has been observed.

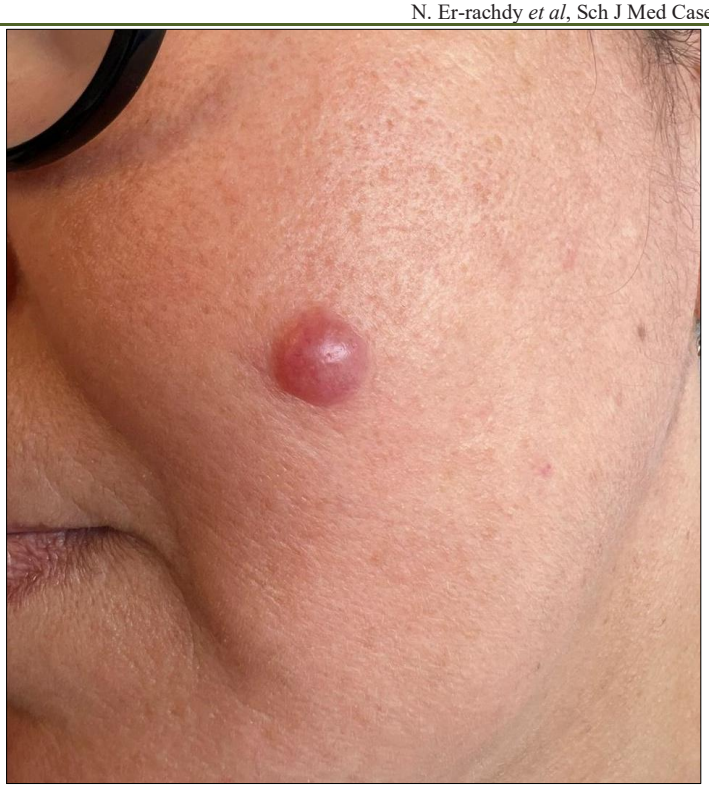

Figure 1: Clinical presentation of primary cutaneous follicle center B-cell lymphoma

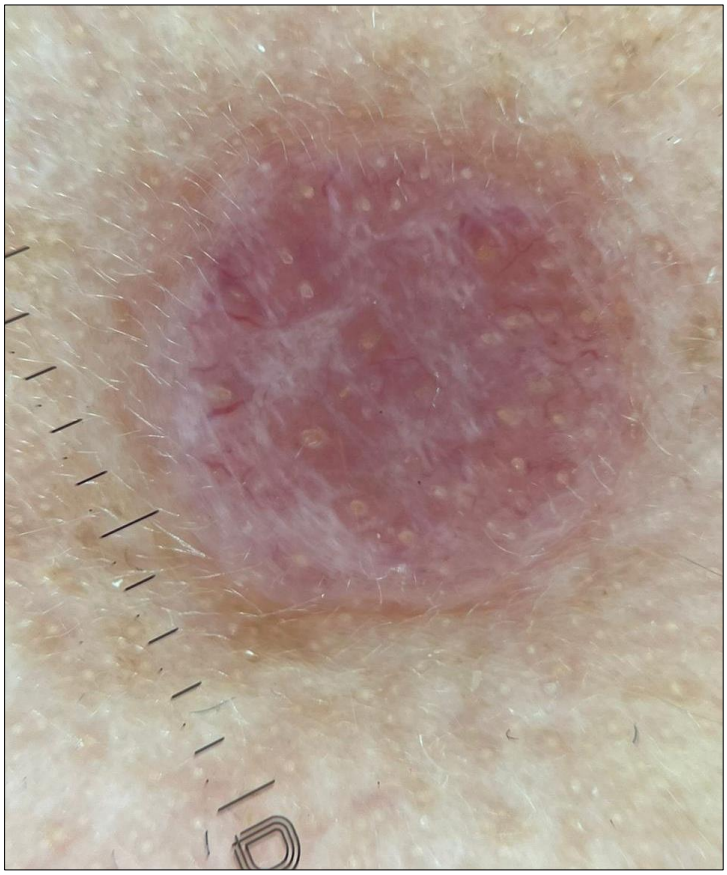

Figure 2: Dermoscopy showing irregular linear vessels, a homogeneous pink-salmon zone, follicular plugs, rosettes, and chrysalis structures

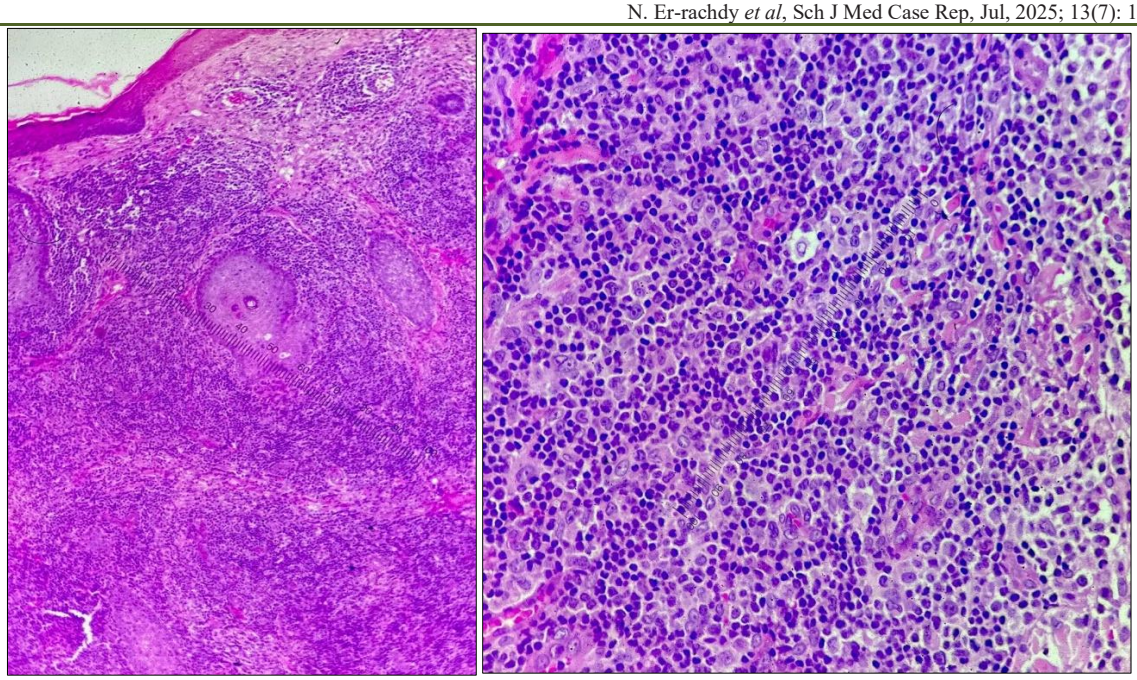

Figure 3: Histopathology features. (a): Gx10: Lymphomatous proliferation with a nodular architecture infiltrating the dermis, showing a periadnexal distribution of neoplastic lymphocytes. (b): Gx40: The infiltrate is predominantly composed of centrocytes, with fewer centroblasts and immunoblasts

DISCUSSION

Primary cutaneous lymphomas (PCL) are extranodal non-Hodgkin lymphomas that arise in the skin without systemic involvement at diagnosis and represent about 4 %–5 % of all non-Hodgkin lymphomas [1,3]. Roughly one fifth are primary cutaneous B-cell lymphomas (PCBCL) [1-4]. Among these, primary cutaneous follicle-centre lymphoma (PCFCL) is the most frequent subtype, accounting for 50 %–60 % of cases. PCFCL usually follows an indolent course: five-year disease-specific survival exceeds 95 %, and extracutaneous spread occurs in fewer than 5 % of patients [5].

Large series place the median age for PCFCL in the fifth to sixth decades, with a slight male predominance and a higher frequency in fair phototypes, although reports in darker skin are increasing [1]. Clinically, PCFCL presents most often as solitary or grouped erythematous-to-violaceous papules, nodules, or plaques on the head and neck, especially the scalp, forehead, and cheeks [6]. In our patient, a single, firm, painless nodule on the left cheek followed this frequently reported distribution. Dermoscopy can guide the clinician toward lymphoma: the literature describes a homogeneous salmon-pink background crossed by linear-serpentine or arborising vessels and traversed by shiny white (chrysalis) streaks [2-8]. This dermoscopic pattern was likewise observed in our case, together with polarising “rosettes,” a rarer sign thought to correspond to optical interactions at adnexal openings. Such features help orient the diagnosis and distinguish PCFCL from more common facial tumours such as basal-cell carcinoma or cutaneous metastasis.

Histopathology remains decisive. In the present lesion we found a nodular dermal infiltrate composed predominantly of centrocytes, with fewer centroblasts and immunoblasts arranged around adnexal structures—findings consistent with PCFCL [5]. Immunohistochemical staining confirmed a germinal-centre B-cell phenotype (CD20, BCL-6 positive) and showed diffuse BCL-2 expression with a Ki-67 index of roughly 30 %. Approximately one third of PCFCLs express BCL-2; some studies link stronger expression to an increased risk of skin-only relapse without affecting overall survival [9]. Awareness of this variability underscores the value of close dermatological follow-up.

Comprehensive staging—including a full skin examination, laboratory tests, and cross-sectional imaging—showed no extracutaneous disease in our patient, confirming the diagnosis of primary cutaneous lymphoma. For solitary PCFCL, guidelines recommend complete surgical excision or low-dose local radiotherapy (20–30 Gy), each yielding local control rates above 90 % [10,11]. Clear margins obtained during excision made further treatment unnecessary, so we opted for clinical and dermoscopic surveillance every six months for two years and annually thereafter.

CONCLUSION

In summary, this case illustrates the classical epidemiological, clinical, dermoscopic, and histopathological profile of PCFCL and emphasises the role of dermoscopy in prompting early biopsy. Timely diagnosis, appropriate staging, and conservative skin-directed therapy underpin the excellent prognosis associated with this lymphoma subtype.

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