Dermatology Practical & Conceptual

Primary Cutaneous Follicle Center B-cell Lymphoma at the Site of a Resolved Herpes Zoster Eruption

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Introduction

In this report we describe the occurrence of a primary cutaneous follicle center B lymphoma in a skin area which had been previously affected by a herpes zoster eruption. The rarity of this phenomenon and its complete remission with topical steroid monotherapy make this report quite remarkable.

Case Presentation

We present the case of a 73-year-old man who came for the first time to our Dermatology Unit in 2019 for a burning and stinging blistering eruption on the left scapular area with a metameric distribution, highly indicative for a herpes zoster outbreak. We treated him with acyclovir 800 mg five times daily for seven days with a complete resolution of lesions.

After seven months the patient returned complaining about the development of six infiltrated plaques on the left scapular region, whose distribution was perfectly overlapping with the resolved shingles eruption (Figure 1A).

A biopsy was performed, and the histologic specimen showed a proliferation of neoplastic follicle center cells invading the entire dermis (Figure 2). Epidermis was spared and separated from the proliferating lymphocytes by a grenz zone in the upper dermis. B-cell immunohistochemistry was positive for CD20 and Bcl6 and only weakly positive for Bcl2. Furthermore, PCR demonstrated monoclonal immunoglobulin heavy chain gene rearrangement. Thus, a diagnosis of cutaneous follicle center lymphoma was made.

The patient had no medical history of malignancy, and his only comorbidity was hypertension. A PET-TC was performed to complete the staging and it resulted negative. This outcome justified a conservative approach, therefore we prescribed clobetasol propionate topical ointment 0.05% one application per day to treat the skin lesions. After 6 weeks, all lesions were already in complete remission (Figure 1B).

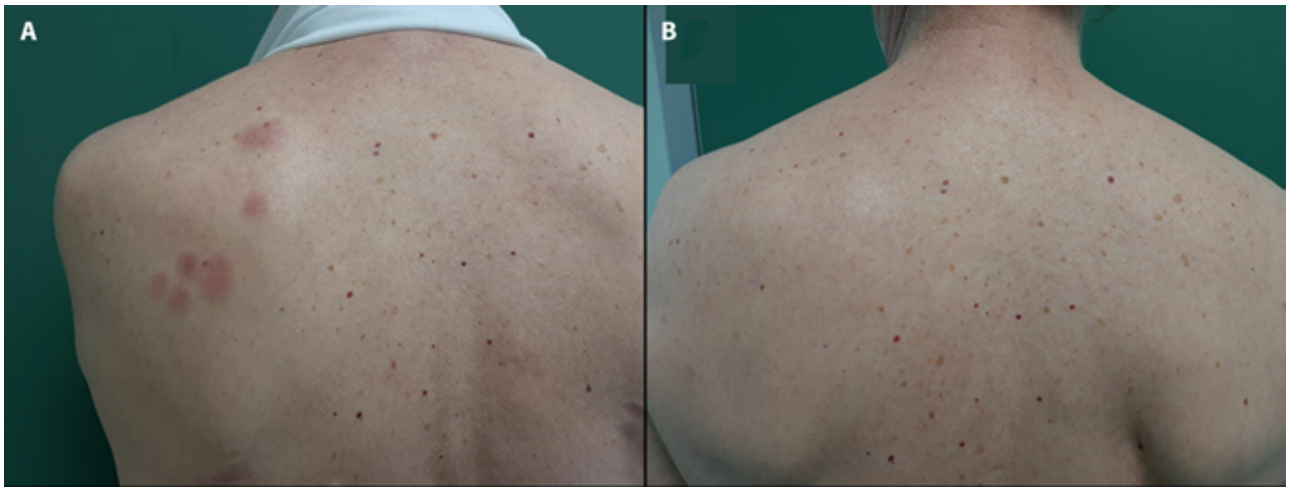

Figure 1. (A) Clinical appearance of lymphomatous plaques on the patient left scapular region. (B) Complete resolution of lesions after topical steroid application.

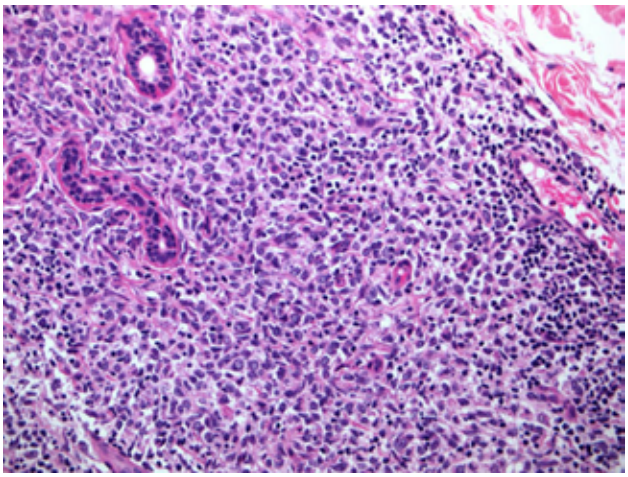

Figure 2. Bioptic specimen of one of the lesions. A neoplastic infiltration of atypical lymphocytes is observed in the dermis (H&E x20).

Conclusions

The occurrence of a skin disease in an area which had previously been affected by another unrelated dermatosis is known as Wolf isotopic response. This phenomenon often occurs with VZV infection representing the "first hit" [1].

The second dermatosis is usually a granulomatous or lichenoid manifestation, however infiltrations by hematologic malignancies, skin tumors, and infections have been described as well [1]. Although unfrequently, also pseudo-lymphomatous infiltrates have been observed in the area of a former herpes zoster [1], while the onset of primary cutaneous lymphomas in this setting is only anecdotal [2].

In order to explain this phenomenon, it has been suggested that varicella-zoster virus (VZV) infection might cause an abnormal lymphocytic activation; however, only in isolated cases VZV DNA was found in the histologic specimen [1,2]. An additional explanation might be that VZV infection locally reduces the immune surveillance, thereby facilitating the onset of neoplasms in the affected area [1].

In this report we have described the appearance of a primary cutaneous follicular B-cell lymphoma in the same area where a shingles outbreak had occurred 7 months before. One similar case already described in literature regarded a centrocytic/centroblastic lymphoma which was treated with systemic interferon alpha obtaining only partial remission [2]. In contrast, our case went into stable remission after application of topical steroids alone and to date no recurrence was observed after 14 months of follow-up, suggesting that clobetasol monotherapy might represent a valid treatment option for this kind of cutaneous neoplasm.

References

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