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Photoclinic

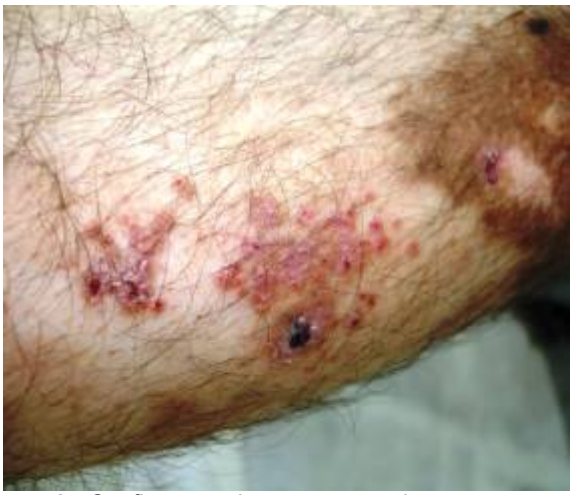

Figure 1. Confluent erythematous papules.

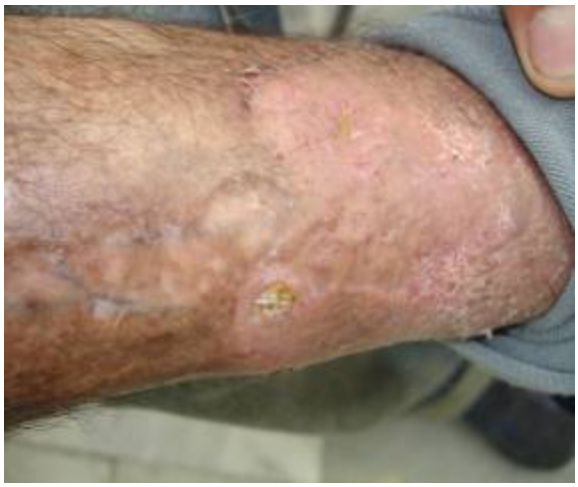

Figure 2. Erythematous plaques with some areas of atrophy, scar, and pigmentation.

A 25-year-old man who had suffered from Hodgkin's disease mixed cellularity type, stage III B, since eight years ago, was referred to our center for cutaneous eruptions evolving for one year. According to his oncologist, the chemotherapy with eight cycles of adriamycin (doxorubicin), bleomycin, vinblastine, and dacarbazine (ABVD), revealed an apparently good remission. On examination, he exhibited confluent erythematous papules and plaques with some areas of atrophy, scar, and pigmentation Which involved symmetrically the lower limbs (Figures 1 and 2). Clinical examination also disclosed mildly enlarged latero-cervical lymph nodes.

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What is Your Diagnosis?

See the next pages for the diagnosis.

Photoclinic Diagnosis: **Cutaneous Granuloma as a Nonspecific Manifestation of Hodgkin's Disease**

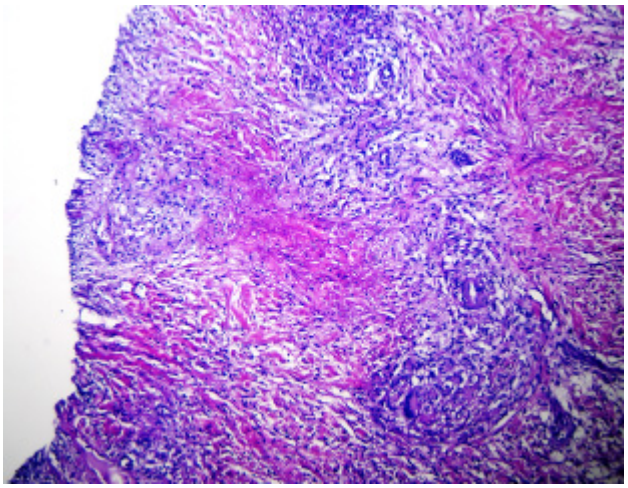

Figure 3. Histomorphologic features of an area of atrophy, scar, and pigmentation (necrobiotic, palisaded granuloma) (H&E, ×40).

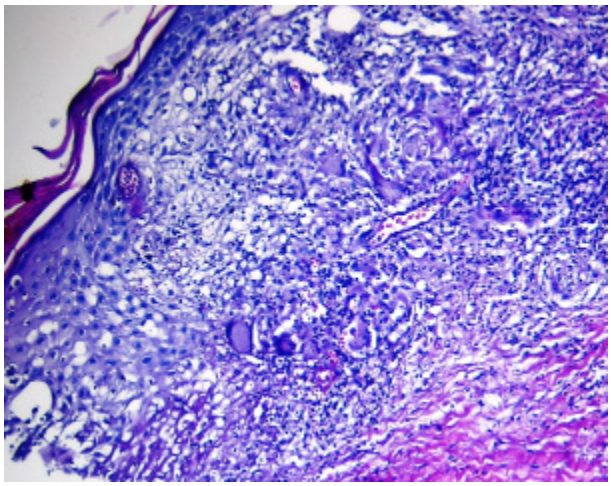

Figure 4. Histomorphologic features of confluent erythematous papules (noncaseating granuloma) (H&E, ×40).

Patients with Hodgkin's and non-Hodgkin's lymphomas may develop noninfectious granulomas in the skin. Cutaneous noninfectious granulomas associated with malignant lymphomas may be granulomatous infiltrates admixed with neoplastic cells within specific skin lesions of malignant lymphoma, or granulomas (sarcoid-like granulomas, necrobiotic granulomas, and granuloma annulare) at sites free from any histologic evidence of malignancy; so, granulomatous skin lesions may be nonspecific manifestations of the underlying lymphoma. They may either antedate the underlying lymphoproliferative disease or may follow its course, sometimes occurring during chemotherapy and radiotherapy. As mentioned before, these granulomas are seen at sites free from any histologic evidence of malignancy such as some particular lymph nodes, liver, and spleen. Skin is involved more rarely.[1–3]

The pathogenic mechanism of skin granulomas in Hodgkin's disease and other lymphomas is not clear. These granulomas may arise as a local-tissue response to cytokines produced by neoplastic cells or sarcoid-like reactions to foreign bodies or against disintegration products from the tumor or against micro-organisms such as fungi or mycobacteria. Another mechanism may be oportunistic infections or reactions to chemotherapy.[2, 4] Generalized granuloma annulare was also reported in a Hodgkin's disease patient following autologous peripheral stem cell transplantation.[5]

There is no strong evidence for any relationship between granuloma formation and prognosis of the associated systemic lymphoma. While some authors suggested that granuloma is a host-protective response against lymphoma and a good prognostic indicator, others believe that granuloma is associated with poor prognosis.[1, 6–8]

In the case reported here, the histopathology of a papule showed, under an acanthotic but uninvolved epidermis, a well-defined non-caseating, granuloma composed of epithelioid histiocytes and giant cells with some lymphocytes at the periphery. The histologic features of a necrobiotic, palisaded granuloma were seen in the skin biopsy of an atrophic area, with palisading pattern of histiocytes around a central area of necrobiotic collagen and mucin (Figures 3 and 4). Stains for acid-fast bacilli and fungi were negative. Immunophenotype of the lymphocytes was CD3+/CD4+/CD5+/CD45RO+/CD30-; so, "granulomatous reaction in noninvolved skin by lymphoma" was diagnosed. A total body computed tomographic scan disclosed enlarged latero-cervical lymph nodes that proved histologically consistent with a Hodgkin's disease mixed cellularity type. In our case, the clinical

features were atypical with atrophic plaques and some areas of scar and pigmentation. Our patient was also a good example of the different expressions of granulomatous reactions in the skin noninvolved by an underlying systemic lymphoma as a nonspecific manifestation.

References

1 Rongioletti F, Cerroni L, Massone C, Basso M, Ciambellotti A, Rebora A. Different histologic patterns of cutaneous granulomas in systemic lymphoma. *J Am Acad Dermatol*. 2004; **51:** 600 – 605.

2 Farrell AM, Henry K, Woodrow D, Francis N, Newlands ES, Mitchell DN, et al. Cutaneous granulomas associated with high-grade T-cell non-Hodgkin's lymphoma. *Br J Dermatol.* 1999; **140:** 145 – 149.

3 Randle HW, Banks PM, Winkelmann RK. Cutaneous granulomas in malignant lymphoma. *Arch Dermatol*. 1980; **116:** 441 – 443.

4 Macaya A, Servitje O, Moreno A, Peyri J. Cutaneous granulomas as the first manifestation of Hodgkin's disease. *Eur J Dermatol*. 2003; **13:** 299 – 301.

5 Sanli HE, Kocyigit P, Arica E, Kurtyuksel M, Heper AO, Ozcan M. Granuloma annulare on herpes zoster scars in a Hodgkin's disease patient following autologous peripheral stem cell transplantation. *J Eur Acad Dermatol Venereol*. 2006; **20:** 314 – 317.

6 Cernea P, Szpirglas H, Brocheriou C, Guilbert F, Bertrand C, Vaillant JM, et al. Inflammatory granuloma of the face with a malignant course. Atypical Hodgkin's disease (author's transl). *Rev Stomatol Chir Maxillofac*. 1978; **79:** 99 – 107.

7 Sacks EL, Donaldson SS, Gordon J, Dorfman RF. Epithelioid granulomas associated with Hodgkin's disease: clinical correlations in 55 previously untreated patients. *Cancer*. 1978; **41:** 562 – 567.

8 Setoyama M, Katahira Y, Kanzaki T, Kerdel FA, Byrnes JJ. Adult T-cell leukemia/lymphoma associated with noninfectious epithelioid granuloma in the skin: a clinicopathologic study. *Am J Dermatopathol*. 1997; **19:** 591 – 595.