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Query/ Note to the author:

Case for Diagnosis

Recurrent ulceronecrotic plaques and nodules with spontaneous remission

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History

A 66-year-old patient presented with a five-week history of an indolent nodule in the right axilla and an ulceronecrotic plaque in the left nuchal region, which already showed signs of regression. Both lesions had occurred within a few weeks, had rapidly increased in size and shown spontaneous ulceration. A similar nodule had occurred on the right side of the neck a few years earlier and had spontaneously healed with scar formation. Six months earlier, the patient had been diagnosed with poorly differentiated adenosquamous lung cancer, pT2b pN2(3/39) cM0, stage IIIA (UICC), which had subsequently been treated by lower lobectomy. He was in good general health and denied any B symptoms. Recent follow-up imaging studies had yielded no evidence of recurrence or metastasis related to the NSCLC (non-small-cell lung cancer).

Clinical findings

Clinical examination showed two ulcerated nodules (3–4 cm in diameter) with markedly elevated, violaceous/hemorrhagic borders in the left cervical region and the right axilla. The lesions were surrounded by a poorly demarcated erythema and coated with a fibrinous layer (Figure 1). There was an atrophic, hypopigmented scar on the right side of the neck where the above-mentioned ulcerated plaque had spontaneously healed years earlier. The remainder of the physical exam was unremarkable.

Histological findings

Biopsies from the right axilla and the left cervical region showed similar histological findings, with an acanthotic, partially parakeratotic epidermis and central ulceration. In the dermis, there was a dense polymorphous infiltrate that extended into the upper subcutis and consisted of numerous small and medium-sized lymphoid cells, multiple histiocytes, and eosinophils (Figure 2a). The vessels were surrounded by a dense mixed infiltrate. In addition, there was focal vascular infiltration by large binucleated blasts as well as vascular occlusion (Figure 2b).

Characterized by their prominent perivascular arrangement, the blast cells showed expression of CD30 (Figure 2c) and CD8 (Figure 2d) on immunohistochemistry, yet no CD56 expression. There was a preponderance of CD4-positive lymphocytes in the dermal infiltrate, with a CD4/CD8 ratio of at least 3 : 1. The percentage of actual neoplastic cells in the entire lymphoid infiltrate was less than 10 %.

Your diagnosis? ...

Diagnosis: Angioinvasive lymphomatoid papulosis (type E)

Clinical course

The initial differential diagnosis included ulcerated cutaneous metastases (caused by the aforementioned lung cancer), ecthyma, necrotizing cutaneous vasculitis, and pyoderma gangrenosum.

Based on the histological and immunohistochemical results and considering the history and clinical course, the patient was diagnosed with an angioinvasive form of lymphomatoid papulosis (type E). As expected, imaging studies (CT of thorax/abdomen) showed no evidence of systemic involvement. Because of the indolent course of this lymphoproliferative disorder, we agreed with the patient to initially adopt a watch-and-wait approach. Given that the lesions healed (with typical atrophic scarring) within a few weeks (Figure 3a), there was no indication for other treatment options such as methotrexate, PUVA, or bexarotene. Disease recurrence was observed during follow-up after a few months (Figure 3b).

Discussion

Lymphomatoid papulosis (LyP) belongs to the spectrum of CD30-positive lymphoproliferative disorders of the skin. This group also includes primary cutaneous anaplastic large-cell lymphoma (cALCL) [1–5]. LyP is characterized by a chronic recurrent course with spontaneous remission within a few weeks and frequent recurrences, usually within a year (waxing and waning) [1, 2, 4, 6]. The condition can be associated with considerable scarring [3, 4]. While the long-term prognosis is very good, 10–13 % of all patients may subsequently develop secondary hematological malignancies [3]. Today, six types of LyP are distinguished based on clinical, (immuno-)histological, and molecular criteria [2, 3, 6, 7]. Described as type E LyP (eschar-like) by Kempf et al. in 2013, the angioinvasive type has in the meantime been included in the current WHO classification [4, 8]. It is characterized by an aggressive clinical and histological picture [4]. Compared with other LyP types, the angioinvasive type presents with only few lesions (paucilesional) marked by rapid growth and ulceration [4]. Clinically, patients exhibit papules, small nodules, and ulcers (up to 4 cm

in diameter) that are covered with a hemorrhagic crust [1, 4]; there is no systemic involvement [4, 9].

The angioinvasive and angiodestructive infiltration pattern with subsequent necrosis is the histological correlate of said ulcerations [3, 4, 6]. The differential diagnosis should include aggressive primary cutaneous lymphomas such as extranodal NK/T-cell lymphoma (nasal type), cutaneous gamma-delta T-cell lymphoma, peripheral T-cell lymphoma not otherwise specified (NOS), as well as secondary cutaneous infiltrates of systemic lymphomas [1, 4, 10].

Immunohistochemically, type E LyP shows a CD8 phenotype in 70 % of cases as well as CD30 expression [1]. It is difficult to make a histological distinction between primary cutaneous anaplastic large-cell lymphoma (cALCL) and angioinvasive LyP [6]. Unlike the latter, however, the former generally presents with only a single lesion and shows no spontaneous remission [3, 6]; ultimately, the diagnosis must therefore be based on these clinical criteria. In our patient, the diagnosis of type E LyP was confirmed by the lesions' spontaneous remission and subsequent recurrence.

Recently, Kempf et al. discussed the limitations related to the “alphabet soup” of the classification of LyP [7] and proposed a structured, purely descriptive approach. Their terminology considers histological, immunophenotypic, genetic, and clinical characteristics, thus reflecting the complexity of this condition. According to the proposed revised nomenclature, our patient's diagnosis is: “cutaneous CD30-positive lymphoproliferative disorder consistent with lymphomatoid papulosis, angioinvasive, CD8+, generalized”.

Conflict of interest

None.

References

- 1 Kempf W, Mitteldorf C. Cutaneous lymphomas: new entities and rare variants. *Pathologe* 2015; 36: 62–9.
- 2 Klemke CD. Cutaneous lymphomas. *J Dtsch Dermatol Ges* 2014; 12: 7–28.
- 3 Wieser I, Tetzlaff MT, Torres Cabala CA, Duvic M. Primary cutaneous CD30+ lymphoproliferative disorders. *J Dtsch Dermatol Ges* 2016; 14: 767–82.
- 4 Kempf W, Kazakov DV, Schärer L et al. Angioinvasive lymphomatoid papulosis: a new variant simulating aggressive lymphomas. *Am J Surg Pathol* 2013; 37: 1–13.
- 5 Kempf W. Cutaneous CD30-positive lymphoproliferative disorders. *Surg Pathol Clin* 2014; 7: 203–22.
- 6 Kempf W, Kazakov DV, Paredes BE et al. Primary cutaneous anaplastic large cell lymphoma with angioinvasive features and cytotoxic phenotype: a rare lymphoma variant within the spectrum of CD30+ lymphoproliferative disorders. *Dermatology* 2013; 227: 346–52.
- 7 Kempf W, Mitteldorf C, Karai LJ, Robson A. Lymphomatoid papulosis – making sense of the alphabet soup: a proposal to simplify terminology. *J Dtsch Dermatol Ges* 2017; 15: 390–4.
- 8 Swerdlow SH, Campo E, Pileri SA et al. The 2016 revision of the World Health Organization classification of lymphoid neoplasms. *Blood* 2016; 127: 2375–90.
- 9 Sharaf MA, Romanelli P, Kirsner R, Miteva M. Angioinvasive lymphomatoid papulosis: another case of a newly described variant. *Am J Dermatopathol* 2014; 36: e75–7.
- 10 Stadler R, Assaf C, Klemke CD et al. Brief S2k guidelines--Cutaneous lymphomas. *J Dtsch Dermatol Ges* 2013; 11 (Suppl 3): 20–30.

Figure 1 Ulcerated nodules with elevated borders in the right axilla (a) and left cervical region (b), surrounded by a poorly demarcated erythema.

Figure 2 Histological findings: central ulceration with adjacent acanthotic epidermis. Polymorphous dermal infiltrate with numerous small and medium-sized lymphoid cells, histiocytes, and numerous eosinophils (hematoxylin-eosin stain [HE], original magnification x 25) (a). High-power view showing perivascular infiltrates consisting of predominantly medium-sized atypical lymphocytes with angioinvasion/angiodestruction and vascular occlusion (HE, original magnification x 200) (b). The atypical angioinvasive lymphocytes show CD30 (c) and CD8 expression (d) (original magnification x 200)

Figure 3 Clinical picture following spontaneous remission with atrophic scar formation (a) and recurrence during follow-up (b).

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