Multiple Eruptive Eccrine Poromas Associated with Chemotherapy and Autologous Bone Marrow Transplantation

Abstract

Eccrine poroma is a benign adnexal tumor that originates from the uppermost portion of the intraepidermal eccrine duct. It usually presents as a solitary tumor. Histopathology shows a monomorphic proliferation of cuboidal cells, which radially extend from the basal layer to the dermis. Here, we present a rare multilesional eruption of eccrine poroma after chemotherapy and bone marrow stem cell transplantation for acute promyelocytic leukemia along with a description of clinical, pathological, and dermoscopic findings.

Keywords: *Chemotherapy, dermoscopy, poromas*

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Introduction

Eccrine poroma (EP) is a slow growing, benign, adnexal neoplasm accounting for 10% of the sweat gland tumors.[1] This tumor belongs to a group of benign eccrine ductal tumors that include eccrine poroma, hidroacanthoma simplex, dermal duct tumor, and poroid hidradenoma.[2] Tumor cells originate from the uppermost portion of the intraepidermal eccrine duct and the acrosyringium.[1,3]

EP arises commonly in areas rich in eccrine sweat glands, such as the palms and soles, as solitary or grouped lesions. Nevertheless, a broader distribution that includes neck, chest, nose, and eyelids has also been reported as a rare case.[3] No predilection for race or sex has been described. The most common affected age groups are middle aged and those in the seventh decade of life.[1,3]

We report a multiregional eruption of EP in a patient whose lesions have been occurring over several years after chemotherapy and stem cell transplantation along with a description of dermoscopic and histologic findings.

Case Report

A 32-year-old woman presented to the clinic with 17 erythematous, dome-shaped, 1–2-mm sized papules on her feet and around her lower eyelid for 8 years [Figure 1a-c]. The patient's remarkable medical history included a 15-year history of acute promyelocytic leukemia that was treated with the following chemotherapy protocol: tretinoin, amphotericin B, busulfan, etoposide, arsenic trioxide, and cytarabine with bone marrow stem cell transplantation 11 years ago. Dermoscopy showed pink areas with salmon halo. Foci of white structureless areas and a vessel network with linear and anastomosing pattern were also appreciated [Figure 2]. Histopathological examination showed a proliferation of cuboidal monomorphic cells radiating from the basal layer into the dermis, which was consistent with EP [Figure 3]. On the patient's request, a few lesions on the face were removed with mild electrocauterization, resulting in patient's satisfaction on follow-up monitoring.

Discussion

Possible causes of EP include actinic damage, human papilloma virus, and radiation.[1] Multiple EP have been reported in patients with a history of radiotherapy, pregnancy, and multiple chemotherapy regimens including cyclophosphamide, doxorubicin, vincristine, and ifosfamide.[1,4-6] Although the etiology of EP is unclear, alterations in cyclin D1, retinoblastoma (Rb),

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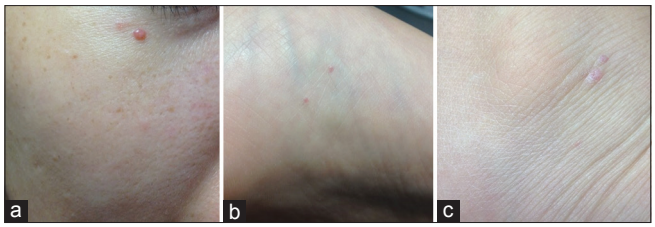

Figure 1: (a-c) Erythematous dome-shaped papules on the lower eyelid and feet

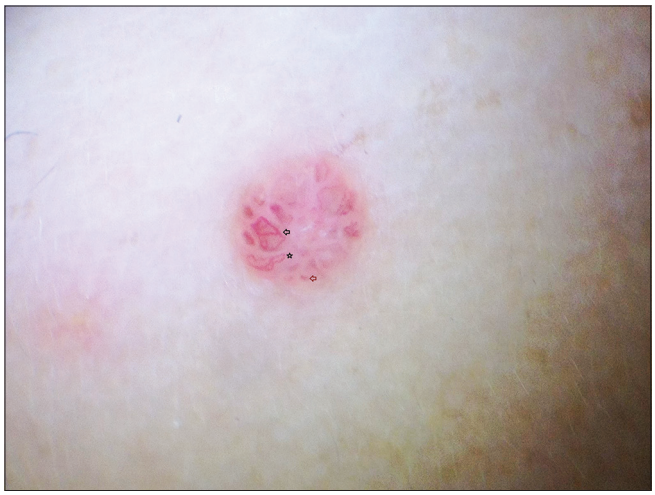

Figure 2: Dermoscopic examination. Pink areas with a salmon halo and foci of white speckles are observed. Vessels show a linear and anastomosing pattern (black arrow), as well as hairpin (star) and comma-shaped vessels (red arrow). Dermlite® DL100 ×10

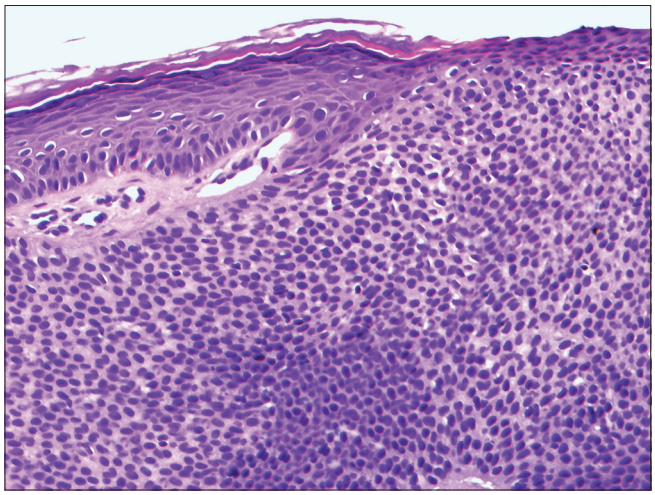

Figure 3: Poroma histology. Proliferation of monomorphic cells radiating from the basal layer into the dermis. H and E ×100

and p53 have been suggested to play a role in the development of this tumor. Genetic predisposition, trauma, and hyperhidrosis have been discussed to be contributing factors.[7]

Chemotherapy is a well-documented cause of various disorders that involve the adnexa such as neutrophilic eccrine hidradenitis and syringosquamous metaplasia. These therapeutic agents or its metabolites may accumulate in the sweat gland and ducts, causing cell damage.[8] Cells are later switched into remodeling and regeneration, a milieu which potentially triggers tumor development.

Dermoscopy is a practical and rapid tool to assess the vascular pattern in EP. In this case, we appreciated pale pink areas with salmon-colored halo, a pattern that is mostly dependent on the rich underlying capillary supply of this tumor. Capillaries showed a linear and anastomosing pattern which gives the appearance of surrounding the islands of poroma cells. On the other hand, focal white spots within the pale pink areas might correspond to segments of dermal fibrosis.

Although dermoscopy is useful to appreciate the colors and capillary pattern of EP, it is limited by its inability to evaluate the bulk of the tumor cells when confirming the diagnosis of poroma.

Conclusion

This is a case of multiregional EP eruption in relation to chemotherapy and autologous bone marrow stem cell transplantation. The dermoscopic and histologic findings are described along with this rare clinical presentation. It is noteworthy to identify possible triggers of multiple EP. Increasing expansion of *in-vivo* assessments such as the dermoscopic examination, even for nonpigmented tumors, may help clinicians differentiate benign EP from other nodular nonpigmented tumors that may show similar vascular patterns.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that name and initial will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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