Ann Dermatol Vol. 32, No. 5, 2020
pISSN 1013-9087 · eISSN 2005-3894
https://doi.org/10.5021/ad.2020.32.5.422

CASE REPORT

A Case of Eccrine Poromatosis in a Patient with a History of Chemotherapy Due to Stomach Cancer

In Hye Choi, Dong Soo Yu, Young Bok Lee

Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea

An eccrine poroma (EP) is a benign adnexal tumor that typically presents as a single lesion. Eccrine poromatosis defined as multiple EPs is an uncommon presentation. A 54-year-old male had undergone operation for stomach cancer 10 years prior and insisted that he had also taken adjuvant chemotherapy. The patient presented with six reddish papules and nodules scattered on the trunk and extremities for 3 years. The histopathologic findings from all six lesions were consistent with EP. No local recurrence was observed after complete removal through punch biopsies. We report a rare case of eccrine poromatosis in the patient with gastric cancer, suspected of being caused by chemotherapy. **(Ann Dermatol 32(5) 422~425, 2020)**

-Keywords-
Eccrine poromatosis

INTRODUCTION

Eccrine poroma is a benign tumor that originates from the intraepidermal ductal portion of the eccrine sweat duct[1]. Eccrine poroma usually appears as a solitary, skin-colored, pink or red papules or nodules mostly on the palm or sole. Eccrine poromatosis is a synonym for multiple eccrine poromas, and it is an unusual occurrence that sometimes could be observed in patients with immunosuppression states or with the experience of either chemotherapy or radiotherapy. The following presentation is a case of eccrine poromatosis in a patient with a history of stomach cancer, suspected of being caused by chemotherapy.

CASE REPORT

A 54-year-old male presented with asymptomatic papules and nodules on his trunk and extremities (Fig. 1). He had noticed these lesions 3 years ago, and the tumors had gradually increased in number. His medical history included operation history due to his stomach cancer 10 years previous. Also, he insisted that he had been treated with adjuvant chemotherapy but we couldn't verify the facts and details since it has been past long time. Physical examination revealed six reddish, sessile papules and nodules on the trunk and extremities. Punch biopsies with complete removal were performed for all six lesions. Histopathological examination demonstrated proliferation of uniform basaloid cells that radiated from the basal layer of the epidermis into the dermis without peripheral palisading (Fig. 2). No cellular atypia was found. Based on the clinical and histological findings, all six tumors were diagnosed as eccrine poroma. The patient have been never revisited our outpatient clinic afterwards.
The written informed consent was obtained from all patients about publishing all photographic materials.

DISCUSSION

Eccrine poromatosis, the term used to describe multiple eccrine poromas, is a rare presentation and was first de-

Received April 1, 2019, Revised October 8, 2019, Accepted for publication October 10, 2019

Corresponding author: Young Bok Lee, Department of Dermatology, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, 271 Cheonbo-ro, Uijeongbu 11765, Korea. Tel: 82-31-820-5023, Fax: 82-31-846-4799, E-mail: lyb80@catholic.ac.kr
ORCID: https://orcid.org/0000-0002-8642-2479

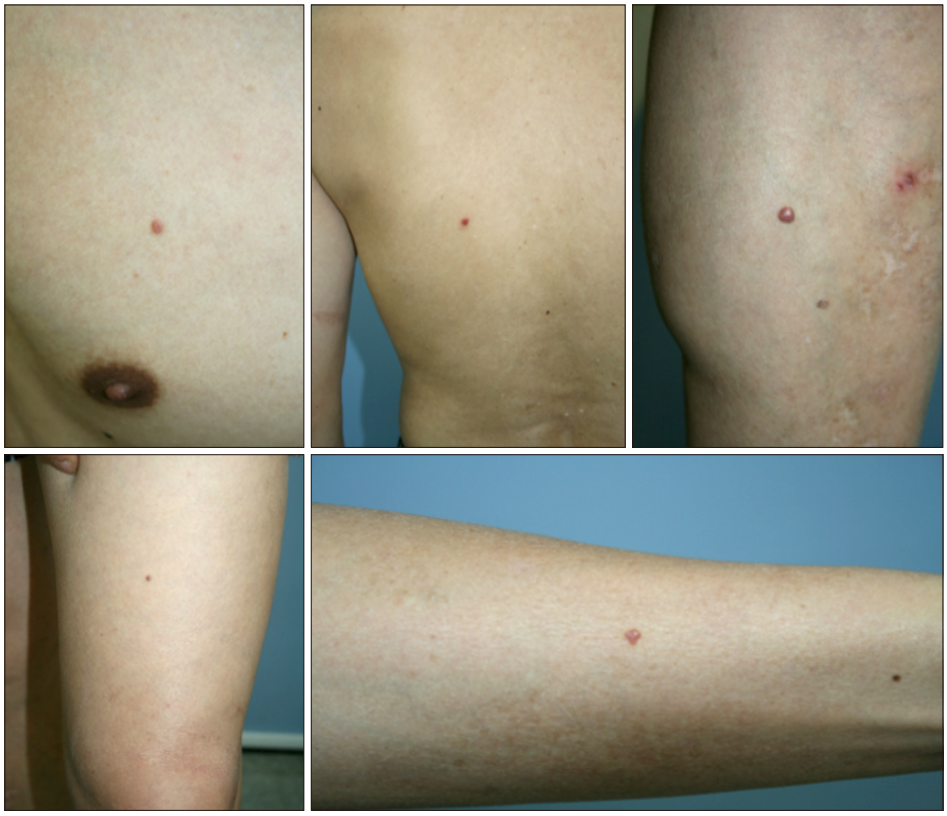

Fig. 1. Multiple asymptomatic, 0.2- to 1.0-cm-sized, dome-shaped, reddish papules and nodules scattered on the chest, back, thighs, and arms.

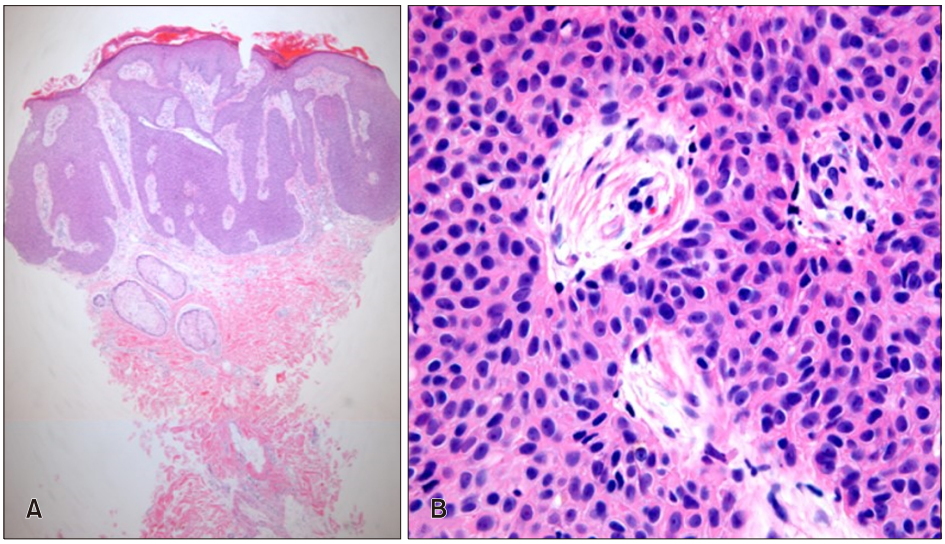

Fig. 2. (A) The tumor consisted of broad anastomosing bands without peripheral palisading. The border between the epidermis and tumor was apparent (H&E, ×40). (B) The tumor cells were small and showed a uniform cuboidal appearance with basophilic, round nuclei. The tumor cells were connected by intercellular bridges (H&E, ×400).

scribed by Goldner[2] in 1970. Although the pathophysiology is unclear, possible causes include actinic damage, hormonal influences during pregnancy, radiation therapy, chemotherapy, immunosuppression state and viral infection (human papillomavirus, merkel cell polyomavirus). Particularly in terms of chemotherapy, a direct sweat duct cytotoxicity from a toxic chemotherapy metabolite has been suspect. About 11 eccrine poromatosis cases, which are related to the chemotherapy, were described in English literature (Table 1)[1,3-11].

Except one case with systemic lupus erythematosus patient[12], the rest patients had underlying hematologic malignancies and multiple chemo regimens including cyclophosphamide, vincristine, and doxorubicin have been frequently reported. The time interval of poroma development has ranged from onset during chemotherapy treatment to decades following therapy[4]. Also, due to its long latency period between the end of chemotherapy and di-

Table 1. Reported cases of eccrine poromatosis associated with chemotherapy

No	Author (yr)	Sex	Age (yr)	Disease	Disease treatment	Number and location of poromas	Poroma treatment
1	Mahlberg et al.[5] (2006)	Male	42	ALL	Allogenic BMT with pretransplant chemotherapy and total body irradiation	14: palms and soles	Not mentioned
2	Navi et al.[6] (2008)	Male	64	NHL	R-CHOP	7: eyelid, chest, forearm	Excision
3	Diamantis et al.[7] (2011)	Male	53	MCL	Allogenic SCT, tacrolimus, photopheresis, corticosteroids, mycophenolate mofetil	6: palms, heels, and left elbow	Excision
4	Fujii et al.[3] (2012)	Female	66	CLL and FL	CLL: cyclophosphamide and others FL: (i) epirubicin, vincristine, (ii) mitoxantrone, cyclophosphamide, vincristine, methotrexate, and prednisolone, (iii) etoposide, cisplatin, and prednisolone	19: abdomen, hip, forearm, thighs	Not mentioned
5	Fujii et al.[3] (2012)	Male	62	Malignant fibrous histiocytoma	Doxorubicin, ifosfamide, radiation	4: lower leg, heel, and sole	Excision
6	Deckelbaum et al.[8] (2014)	Male	73	Testicular lymphoma	CHOP and radiation	30: soles	Not mentioned
7	Garshick et al.[9] (2014)	Male	46	AML	Cytarabine, daunorubicin, etoposide, autologous SCT	22: palms and soles	Not mentioned
8	Takahashi et al.[10] (2015)	Female	63	AML	Idarubicin, cytarabine, prednisolone and autologous SCT	Not mentioned: abdomen, forearm, lower legs	Not mentioned
9	Mayo et al.[4] (2015)	Male	43	MCL	R-hyper-CVAD+autologous SCT with pretransplant busulfan, cytoxan, and etoposide	16: arms, hands, and feet	Excision, imiquimod cream, and cryosurgery
10	Aung et al.[11] (2017)	Male	45	AML	Chemotherapy followed by allogeneic SCT	Not mentioned: fingers, toes, and heels	Not mentioned
11	Valdebran et al.[1] (2018)	Female	32	AML	Tretinoin, amphotericin B, busulfan, etoposide, arsenic trioxide, and cytarabine with BMSCT	17: lower eyelid, feet	Electro-cauterization

ALL: acute lymphoblastic leukemia, BMT: bone marrow transplant, NHL: Non-Hodgkin lymphoma, R-CHOP: rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone, MCL: mantle cell lymphoma, SCT: stem cell transplant, CLL: chronic lymphocytic leukemia, FL: follicular lymphoma, CHOP: cyclophosphamide, doxorubicin, vincristine, and prednisone, AML: acute myeloid leukemia, R-hyper-CVAD: rituximab, cyclophosphamide, vincristine, doxorubicin, dexamethasone, followed by methotrexate and cytarabine, BMSCT: bone marrow stem cell transplant.

agnosis, remodeling of the sweat gland apparatus or regeneration of damaged skin appendages has been suggested[3].

Considering 20% of its malignant counterpart, eccrine porocarcinoma are originated from a benign poroma, an excisional biopsy is recommended[13]. Outside of excision, imiquimod 5% cream, cryotherapy, or CO2 lasers have been reported as an alternative treatment. In this case, all six lesions were excised completely through punch biopsies and showed no recurrence to date. Herein, we report a multiregional eruption of eccrine poroma as a rare case. To our knowledge, our case is the first of eccrine poromatosis in patient with underlying solid tumor in the Korean literature.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

FUNDING SOURCE

None.

DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

In Hye Choi, https://orcid.org/0000-0001-5065-2080
Dong Soo Yu, https://orcid.org/0000-0002-5399-4796
Young Bok Lee, https://orcid.org/0000-0002-8642-2479

REFERENCES

1. Valdebran MA, Hong C, Cha J. Multiple eruptive eccrine poromas associated with chemotherapy and autologous bone marrow transplantation. Indian Dermatol Online J 2018;9:259-261.
2. Goldner R. Eccrine poromatosis. Arch Dermatol 1970;101:606-608.
3. Fujii K, Aochi S, Takeshima C, Ohtsuka M, Hamada T, Asagoe K, et al. Eccrine poromatosis associated with polychemotherapy. Acta Derm Venereol 2012;92:687-690.
4. Mayo TT, Kole L, Elewski B. Eccrine poromatosis: case report, review of the literature, and treatment. Skin Appendage Disord 2015;1:95-98.
5. Mahlberg MJ, McGinnis KS, Draft KS, Fakharzadeh SS. Multiple eccrine poromas in the setting of total body irradiation and immunosuppression. J Am Acad Dermatol 2006;55(2 Suppl):S46-S49.
6. Navi D, Fung M, Lynch PJ. Poromatosis: the occurrence of multiple eccrine poromas. Dermatol Online J 2008;14:3.
7. Diamantis ML, Richmond HM, Rady PL, Tyring SK, Cutlan JE, Torres-Cabala C, et al. Detection of human papillomavirus in multiple eccrine poromas in a patient with chronic graft-vs-host disease and immunosuppression. Arch Dermatol 2011;147:120-122.
8. Deckelbaum S, Touloei K, Shitabata PK, Sire DJ, Horowitz D. Eccrine poromatosis: case report and review of the literature. Int J Dermatol 2014;53:543-548.
9. Garshick M, DeFilippis EM, Harp J, Gaan J. Eccrine poromatosis in a patient with acute myeloid leukemia following chemotherapy. Dermatol Online J 2014;20:13030/qt6b7954gg.
10. Takahashi C, Nishi K, Minami-Hori M, Kishibe M, Ishida-Yamamoto A, Iizuka H. Multiple poromas following combination chemotherapy and autologous peripheral blood stem cell transplantation. J Dermatol 2015;42:430-432.
11. Aung PP, Rady PL, Nagarajan P, Ivan D, Tetzlaff MT, Curry JL, et al. Detection of Merkel cell polyoma virus and beta human papillomavirus in multiple eccrine poromas in a patient with acute leukemia treated with stem cell transplant. Am J Dermatopathol 2017;39:489-491.
12. Yoshii Y, Matsuo S, Nishizawa A, Satoh T. Multiple eccrine poromas in a patient with systemic lupus erythematosus. Eur J Dermatol 2018;28:837.
13. Robson A, Greene J, Ansari N, Kim B, Seed PT, McKee PH, et al. Eccrine porocarcinoma (malignant eccrine poroma): a clinicopathologic study of 69 cases. Am J Surg Pathol 2001;25:710-720.