

Eccrine poromatosis: A Case Report

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ABSTRACT:

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Eccrine poroma is a benign adnexal tumor derived from acrosyrigium. Initially described in 1956 by Pinkus, *et al*, *Eccrine poroma* is an infrequent tumor that usually presents as a solitary lesion on palms and soles, mainly in post middle-aged persons.

Multiple *Eccrine poromas*, or *Eccrine poromatosis*, are a very rare clinical variant^{1,2}. There have only been seven other such reported cases. Many cases occur with other diseases or conditions such as hidrotic ectodermal dysplasia⁵, radiation therapy^{6,7}, and myeloproliferative disorders^{8,9}.

We present a sixty year old female patient with eruption of five erythematous papules at both inguinal areas, the left buttock, and right calf. Symptoms erupted six months after treatment of breast cancer two years ago. Histopathologic findings showed typical *Eccrine poroma*. The presence of *Eccrine poromatosis* in patients after the treatment of breast cancer has not been previously reported.

Key words: Eccrine poromatosis; Multiple Eccrine poromas

บทคัดย่อ :

พรชัย โพธิ์นามทอง เบญจัสวีว์ ปัทมดิลก รายงานผู้ป่วยโรค ECCRINE POROMATOSIS วารสารโรคผิวหนัง 2552; 25: 191-196.

สถาบันโรคผิวหนัง กรมการแพทย์ กระทรวงสาธารณสุข

Eccrine poroma เป็นเนื้องอกของผิวหนังชนิดหนึ่งซึ่งมีจุดกำเนิดมาจากท่อของต่อมเหงื่อส่วนปลายซึ่งเป็นส่วนที่ขุดอยู่ในชั้นหนังกำพร้า มีการรายงานผู้ป่วยที่เป็นของเนื้องอกชนิดนี้มาตั้งแต่ปี ค.ศ.1956 โดย Pinkus และคณะ ซึ่งเนื้องอกชนิดนี้ส่วนใหญ่จะเกิดขึ้นเป็นก้อนเดี่ยว และมักพบที่บริเวณฝ่ามือฝ่าเท้า มักพบในผู้ป่วยวัยกลางคนขึ้นไป การพบเนื้องอกชนิดนี้หลายก้อนในคนไข้รายเดียวพบได้น้อยมาก เคยมีการรายงานผู้ป่วยไว้เพียง 7 ราย ซึ่งผู้ป่วยส่วนมากจะพบเนื้องอกชนิดนี้ร่วมกับโรคหรือภาวะอื่นด้วยเช่น hidrotic ectodermal dysplasia⁵, หลังได้รับการฉายรังสีรักษา^{6,7} และมะเร็งเม็ดเลือดและต่อมน้ำเหลือง^{8,9} รายงานฉบับนี้เป็นการนำเสนอผู้ป่วยหญิงอายุ 60 ปี มาตรวจรักษาเรื่องตุ่มเนื้อสีแดง 5 ตุ่มที่ขาหนีบทั้งสองข้าง, สะโพกซ้าย และ น่องขวา ซึ่งเป็นมานาน 6 เดือน ผู้ป่วยรายนี้เคยเป็นมะเร็งเต้านมซึ่งได้รับการรักษาไปแล้วเมื่อ 2 ปีก่อน ผลตรวจทางจุลพยาธิวิทยาพบว่าเข้าได้กับ Eccrine poroma การพบว่าเนื้องอกชนิดนี้เกิดขึ้นหลายก้อนพร้อมกันในผู้ป่วยที่เคยได้รับการรักษาโรคมะเร็งเต้านมนั้น ยังไม่เคยมีการรายงานมาก่อน

คำสำคัญ: เนื้องอกท่อต่อมเหงื่อส่วนปลาย

Eccrine poroma is a benign adnexal neoplasms derived from acrosyrigium and characterized by proliferation of poral epithelial cells with ductal differentiation. Initially was described in 1956 by Pinkus, *et al*, eccrine poroma is a not infrequent tumor usually presents as a solitary lesion on the palms of the hands and soles of the feet, but they can also appear at any cutaneous surface. It arises mainly in post middle-aged persons.

A rare clinical variant is *multiple eccrine poromas*, or *eccrine poromatosis*, which involves multiple lesions on the palms, soles or diffuse, widespread distribution^{1,2}. In

literature review, there have only been seven other such reported cases since 1970. Many cases occur in conjunction with another disease or condition such as hidrotic ectodermal dysplasia⁵, radiation therapy^{6,7}, and/or myeloproliferative disorders^{8,9}.

We present a sixty year old female patient who developed *Eccrine poromatosis* six months after treatment of breast cancer. This case has not been previously reported.

Case report

A sixty-year-old Thai woman from Bangkok came to the Institute of Dermatology with five asymptomatic erythematous papules presented at both inguinal areas, left buttock and right calf of 6 months. The lesions gradually enlarged without erosion or bleeding.

Two years ago she had stage I breast cancer afflicting her left breast. She was treated with modified radical mastectomy and adjuvant chemotherapy. No recurrence of breast cancer has been detected to date.

She also had diabetic mellitus type II for ten years. She is using subcutaneous insulin injections plus oral hypoglycemic drugs. Her fasting blood sugar level is well controlled.

Physical examination revealed five discrete, small (3 to 10 mm in diameter) soft angiomatous papules. Two lesions occurred at the right inguinal area, and three lesions occurred separately at the left inguinal area, left buttock and right calf respectively (figures 1). Differential diagnoses included cherry hemangiomas, skin tags, warts, pyogenic granulomas and metastasis carcinomas.



Figure 1 Right inguinal area.

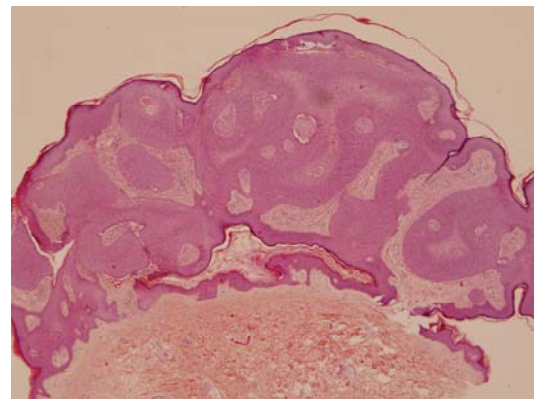


Figure 2 Histopathological examination (x40)

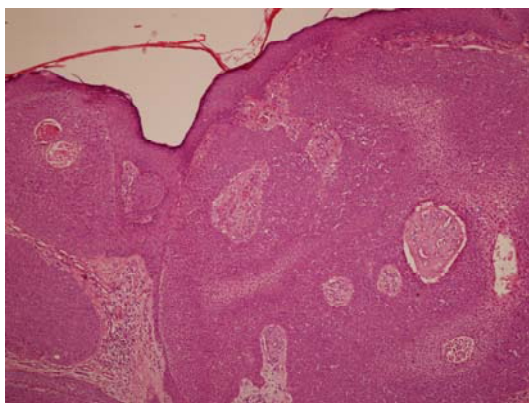


Figure 3 Histopathological examination (x100)

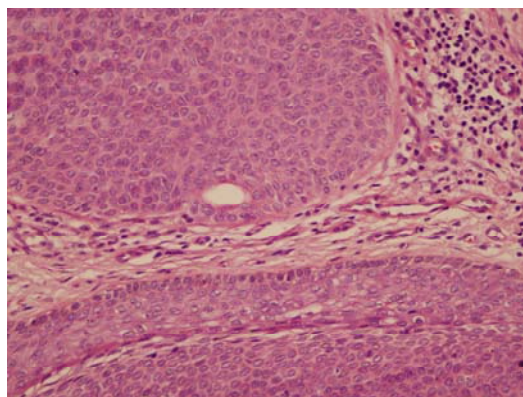


Figure 4 Histopathological examination (x400)

Histopathological examination of the lesion on the right inguinal area revealed dome-shaped epidermal proliferation with broad anastomosing bands emanating from epidermis with loose vascular stroma (figure 2). The tumor is composed of small, uniform cuboidal cells with round, deeply- basophilic nuclei connecting with each other via intercellular bridges. Keratinization within tumor

bands or nuclear atypia, or palisading of tumor cells at the periphery, were both absent (figure 3). Characteristic eccrine ductal lumens lined with eosinophilic cuticle were present (figure 4). These findings were consistent with *Eccrine poroma*.

Other lesions were treated with CO₂ laser. There is no recurrence or new lesions detected post-treatment.

Discussion

An eruption of multiple lesions of *Eccrine poroma* is rarely reported. In 1970, R. Goldner³ was the first to describe such a case with a sixty five-year-old white woman with *Eccrine poromatosis* on her hands and feet who had been afflicted with the condition for twenty years.

Later, A. Ogino⁴ described a female patient with linear *Eccrine poromas* on the right leg. Neither initial report noted any associated diseases or conditions with the patients. However, subsequent cases have reported associating diseases or conditions including hidrotic ectodermal dysplasia⁵, chronic radiation dermatitis from x-ray therapy for chronic osteomyelitis⁶, mycosis fungoides with whole body electron beam irradiation⁷, acute lymphocytic leukemia with total body irradiation and allogeneic bone marrow transplantation followed by development of severe sclerodermoid graft-versus-host disease⁸, and non-Hodgkin lymphoma with chemotherapy and rituximab treatment⁹ (Table I).

Table I Reports of *Eccrine poromatosis* and Characteristics

Case No.	Author/ year of report	Sex	Age of patient (year)	Associated diseases	Number of lesions	Site	Duration of lesion before diagnosis
1.	Goldner R. ³ 1970	F.	65	-	>100	Hands, Feet	20 years
2.	Ogino A. ⁴ 1976	F.	44	-	multiple	Linear lesion at right leg	20 years
3.	Wilkinson RD,et al. ⁵ 1977	F.	44	HED	multiple	Thighs, insteps, ankles, toes, calves, wrists, forearms, buttocks, abdomen	4 years
4.	Ullah K, et al. ⁶ 1989	M.	70	Chronic radiation dermatitis	7	Right lower leg	37 years
5.	Kurokawa M, et al. ⁷ 2001	M.	72	Mycosis fungoides with whole body electron beam irradiation	14	Thighs, right lumbus, left elbow/ brachium/leg /buttock /breast, shoulders	10 years
6.	Mahlberg MJ, et al. ⁸ 2006	M.	42	ALL with allogeneic BMT, severe sclerodermoid GVHD with PUVA & cyclosporine & methylprednisolone	14	Palms, left sole	2 years
7.	Navi D, et al. ⁹ 2008	M.	64	NHL with CHOP&Rituximab Hypertension Colorectal carcinoma	8	Left nipple/ankle /forearm, chest, eyelid	Several months
8.	Recent report	F.	60	Breast cancer stage I with MRM & adjuvant chemotherapy Diabetes Mellitus type II	5	Inguinal areas, left buttock, right calve	6 months

Abbreviations: F: female; M: male; HED: hidrotic ectodermal dysplasia; ALL: acute lymphocytic leukemia; BMT: bone marrow transplantation; GVHD: graft-versus-host disease; PUVA: psoralen plus UVA radiation therapy; NHL: non-Hodgkin lymphoma; MRM: modified radical mastectomy.

The exact pathogenesis of *Eccrine poromatosis* associated with these underlying diseases or conditions remains to be elucidated. In cases of immunosuppression and irradiation, Mahlberg has postulated that an underlying genetic defect and predisposition of the tumor suppressor gene with inactivation of the remaining normal copy of this gene by these conditions may be a part of tumorigenesis (loss of heterozygosity)⁸. The presence of *Eccrine poromatosis* in patients with breast cancer who received mastectomy and adjuvant chemotherapy has never been reported before. But an occurrence with diabetes mellitus type II may be a part of a higher incidence of these underlying conditions in elderly patients.

Because of the polymorphic gross appearance and possible lack of characteristic location clues, clinical diagnosis of *Eccrine poromatosis* is often difficult. Most case reports are diagnosed by typical histopathological features. So the rare incidence of case reports of eccrine poromatosis may be from an unfamiliarity and lack of histopathology confirmation before treatment.

Eccrine poroma, primarily on the palms and soles can be treated by simple excision or electrosurgical or laser

destruction⁸. *Eccrine poromatosis* can likewise be treated in this way.

In very rare occurrences, malignant transformation of *Eccrine poroma* has been reported¹. This may be of particular concern in an immunocompromised patient, necessitating a thorough and careful examination.

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