Case Report

Verrucous Eccrine Poroma of Retroauricular Region

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Abstract

Eccrine poroma (EP) is a benign neoplasm of sweat glands originating from the terminal intraepidermal eccrine duct. This tumor is generally known to present over acral locations, most commonly over palmar and plantar surfaces; however, it has also been documented on the trunk, face, and neck region. EP over the auricle is rarely reported. We are reporting a 71-year-old male who presented with a mass in the right retroauricular region, which was histopathologically suggestive of EP.

Keywords: Auricle, benign, eccrine poroma

INTRODUCTION

Eccrine poroma (EP) is a benign neoplasm originating from the intraepidermal duct of the sweat glands, also known as acrosyringium. This unusual tumor is known to occur at acral areas of the body such as palms and soles, and recently it was found that it could occur over other body sites. However, only a few cases have been reported in the head-and-neck area.1 We report a rare case of EP of the right retroauricular region.

CASE REPORT

A 71-year-old male presented with a gradually increasing asymptomatic mass on the back of the right auricle for 1 year. There was no history of trauma or infection. On examination, there was a single, protruding, skin-colored, verrucous, sessile nodular lesion of size about 1.5 cm × 1.0 cm on the right retroauricular area [Figure 1]. The lesion was nontender and firm in consistency with no ulceration. We performed an excisional biopsy with the possibility of verruca vulgaris, verrucous carcinoma, squamous cell carcinoma, pyogenic granuloma, and soft tissue tumor of uncertain etiology. Histopathological findings revealed broad anastomosing bands extending from the epidermis to dermis with multifocal fibrovascular cores and irregular duct-like structures [Figure 2a]. There were also tightly packed small uniform cells with central round-to-oval nuclei, prominent nucleoli, and occasional clear cytoplasm [Figure 2b]. We did not find any necrosis, nuclear atypia, or mitosis in the specimen. Histopathological report was suggestive of EP. Keeping the clinical and histopathological findings in view, a final diagnosis of verrucous EP of the retroauricular area was made. After complete excision, the patient is well without any recurrence at 6-month follow-up.

Figure 1: Verrucous tumor in the right retroauricular area

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How to cite this article: Sharma RK, Gupta M, Gulati A, Gupta A. Verrucous eccrine poroma of retroauricular region. Indian J Dermatol 2018;5:113-5.

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Quick Response Code: Website: www.ijdpdd.com
DOI: 10.4103/ijdpdd.ijdpdd_18_18

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Poromas are benign tumors of the duct opening on the surface of the skin as a sweat pore. EP was first described by Pinkus et al. in 1956 and was classified as tumor originating from eccrine sweat glands, but recent studies suggest that apocrine component may be present as well.[3] Eccrine tumors account for only 1% of neoplasia of the skin and EP is seen in only 10% of such eccrine involvement.[3]

Trauma, chronic radiation exposure, preexisting skin disease, human papillomavirus infection Bowen’s disease, and sebaceous nevus have been reported as risk factors.[2] The skin lesion of EP usually presents as solitary, slow-growing, skin-colored or pigmented, pedunculated, sessile papule, or nodule.[3] The surface of these lesions may be smooth, verrucous, or ulcerated. They are generally asymptomatic but may be slightly itchy or painful. The tumor presents as a protruding mass from a cup-shaped depression. Approximately 65% of cases occur on the sole and 10% on the hands where high concentration of eccrine sweat glands exists.[4] Other uncommon sites are on the neck, chest, forehead, nose, and scalp with sporadic occurrences.[3] Most of the cases with scalp involvement are reported in the Korean literature.[4,6] Moore et al. compared patients with poroma in the head-and-neck area with lesions on the extremities. Pigmented and asymptomatic lesions were present more commonly over the head-and-neck areas than extremities.[7]

Depending on the architectural pattern, poromas are divided into four groups.[8] Hidroacanthoma simplex or intraepidermal poroma neoplastic proliferation confined to the epidermis. EP neoplastic proliferation extends from epidermis into superficial dermis. Pure dermal type (tumor localized into dermis only with no epidermal connection) can be divided into two types: dermal ductal tumor composed of solid aggregation poroid and cuticular cells and poroid hidradenoma is solid-cystic type [Table 1].[8] The tumor cells are uniformly cuboidal with a round basophilic nucleus and are connected by intercellular bridges. The border between the tumor and the stroma is well defined. The tumor cells contain a significant amount of glycogen which is associated with cytoplasmic clearing and periodic acid–Schiff positivity[5] These cells are devoid of melanin and tonofilaments, and the nucleolus is inconspicuous. Vacuolization in the intracytoplasmic and intercellular areas are characteristic histological features, resembling the formation of eccrine ducts,[1] and help to differentiate it from basal cell carcinoma and seborrheic keratosis. In spite of being benign necrosis, few mitotic figures and vascularized stroma may be seen. Cuticular cells have small nuclei and pale cytoplasm. Immunohistochemistry of poromas suggests the ductal origin of these tumors. Dermatoscopic features of EP are variable but the leaf and flower pattern of vasculature is unique to EP.[9]

Multiple disseminated EP is known as eccrine poromatosis and is usually seen in patients on radiation and chemotherapy. EP has a chance to develop “malignant” poroma (porocarcinoma) in a mean time of 8.5 years. According to a study by Sawaya and Khachemoune, it has been found that about 18% of poromas transform to porocarcinoma.[2] Porocarcinoma shows more exophytic and ulcerative appearance with spontaneous bleeding, sudden itching sense or pain, and rapid growth in a short period than EP.[2] In a case of reported malignancy, it causes multiple cutaneous metastases leading to death.[3]

We want to conclude that EP is of varied morphology and can present on sweat glands containing skin, so a clinical suspicion is rarely there. All the soft-tissue tumors should be examined histopathologically. EP is a benign lesion but can be transformed into malignancy, so early detection, complete excision, and close follow-up are important in the management of the tumor.

Table 1: Variants of poroma

| Variants                  | Depth of neoplastic cells                      |
|---------------------------|------------------------------------------------|
| Hidroacanthoma simplex    | Intraepidermal                                  |
| Eccrine poroma            | Epidermal and superficial dermis                |
| Dermal ductal             | Dermal neoplastic cells arranged in solid pattern |
| Poroid hidradenoma        | Dermal neoplastic cells arranged in solid cystic pattern |

Figure 2: (a) Broad anastomosing bands extending from epidermis to dermis with irregular duct-like structure (H and E, ×40). (b) Small cuboidal cells forming broad bands with hyalinized stroma around focal duct lumen (H and E, ×400)

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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