Concomitant poroma and porocarcinoma*

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Abstract: Eccrine poromas and porocarcinomas are adnexal tumors derived from the sweat duct epithelium. However, eccrine poroma is benign in nature, whilst eccrine porocarcinoma is regarded as its malignant counterpart. We report the case of a man who presented simultaneously with an eccrine poroma and eccrine porocarcinoma. Both lesions had no clear distinctive features, enhancing the need of high-level clinical suspicion together with surgical excision and histopathology for prompt diagnosis confirmation.

Keywords: Eccrine porocarcinoma; Poroma; Sweat gland neoplasms

INTRODUCTION

Eccrine poroma (EP) is a benign adnexal tumor derived from the intra-epidermal sweat duct epithelium. Eccrine porocarcinoma (EPC), instead, is regarded as the malignant counterpart of EP. Herein we report the case of a man who presented simultaneously with an EP and an EPC.

CASE REPORT

We report a 74-year-old male patient who presented with a 4-year history of two skin lesions with progressive growth. Physical examination showed a 0.5-cm, dome shaped, well-circumscribed erythematous-to-violaceous nodule on the chest, and a 1.5-cm, irregular and lobulated-shaped tumor on the back (Figures 1 and 2). We performed a surgical excision of both lesions and reached the histopathological diagnosis of EP on the chest and EPC on the back (Figures 3 and 4).

DISCUSSION

EP is a benign adnexal neoplasm, whose clinical appearance is that of a pink to red, solitary nodule, papule, or plaque.[1,2]

On the other hand, EPC is a rare malignant sweat gland neoplasm affecting most often people in the 6th-7th decades of life. In most cases, EPC is present for several years (mean time: 4.5 years) prior to diagnosis.[3]

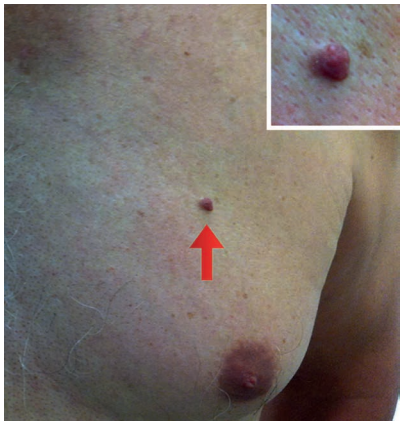

Figure 1: Eccrine poroma. Erythematous to violaceous dome-shaped nodule located on the chest

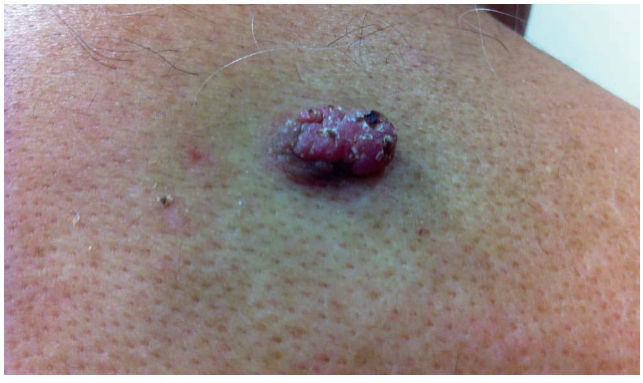

Figure 2: Eccrine porocarcinoma

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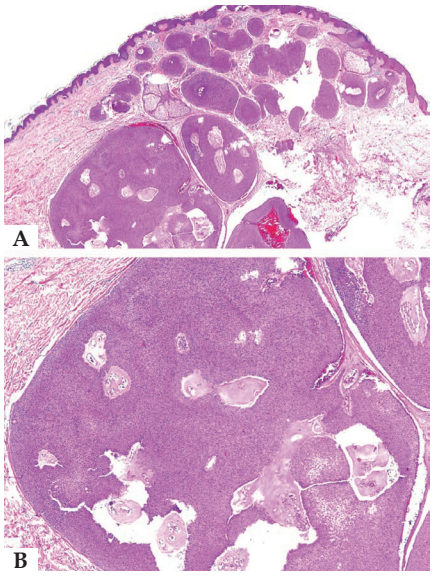

Figure 3 A and B: Histopathology of Eccrine poroma. Nests of uniform small cuboidal poroid cells with monomorphic nuclei and narrow duct-like lumina lined by eosinophilic cuticles (**A:** Hematoxylin & eosin stain, X40. **B:** Hematoxylin & eosin, X100)

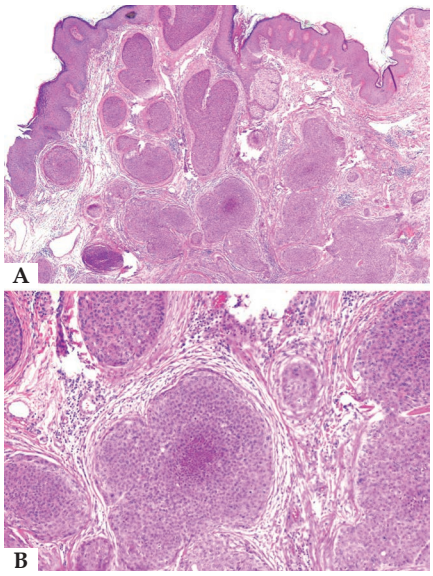

Figure 4 A and B: Histopathology of Eccrine porocarcinoma. Lobular infiltrative tumor composed of small cuboidal cells forming ductal lumina that extended into the dermis. Closer examination reveals atypical neoplastic cells with hyperchromatic nuclei and some mitotic figures (**A:** Hematoxylin & eosin stain, X40. **B:** Hematoxylin & eosin stain, X100)

EPC may arise *de novo* or evolve from a preexisting EP. Up to 18% of EPC come from EP with a high variable time of years to decades.[2,4]

EPC can be observed as an erythematous-to-violaceous nodule, papule, plaque, or tumor, arising most often on lower extremities, followed by the head.[3]

The differential diagnosis includes basal and squamous cell carcinoma, pyogenic granuloma, verruca vulgaris, adenocarcinoma, and amelanotic, pigmented, or desmoplastic nodular variants of melanoma.[5]

The diagnosis of EPC is difficult. Luz *et al.* analyzed 8 cases of EPC and found that, even after the initial biopsy (performed in primary care clinics by non-expert histopathologists), half of the patients had an inaccurate diagnosis with a mean time of 36 months until definitive treatment by a cancer center.[6]

Sudden clinical changes – such as sudden growth, ulceration, and spontaneous bleeding in a longstanding stable lesion – suggest malignant degeneration.[4,7]

Dermoscopy does not help the diagnosis, as both EP and EPC can present with polymorphous vessels. Histopathologic criteria, instead, are useful to differentiate both entities. Some features are indicative of EPC: atypical poroid cells with pleomorphic nuclei, increased nuclear-cytoplasmic ratio, high atypical mitotic activity rate, ductal differentiation, and ill-defined or infiltrating borders.[7] This latter is considered the most important feature to differentiate between malignant and benign tumors, as cellular atypia can also occur in benign poromas.

EPC is potentially fatal. The incidence of metastasis to lymph nodes is 20%, whilst to viscera is 10%. Risk factors for nodal metastasis include the presence of more than 14 mitosis per high-power field, a Breslow index of more than 7 mm, and lymphovascular invasion.[6,8] The role of sentinel lymph node is doubtful in these cases.[9]

Surgical excision with histologically clear margins is the optimal management for EP undergoing recent changes, as an incisional biopsy may appear falsely benign.[7] In early EPC lesions, cure is possible in up to 70-80% of patients, although a high recurrence rate of up to 20% has been reported.[10] For patients with metastasis, there is no adjuvant therapy with strong evidence for the management of this tumor.

Since EPC is a rare tumor with morphological particularities and similarities to other carcinomas, its diagnosis is challenging. We describe the case of a patient with an EP and an EPC simultaneously. Since both lesions had no clear distinctive features, a high level of clinical suspicion and surgical excision with histopathological analysis are critical to make an early and accurate diagnosis. ❑

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