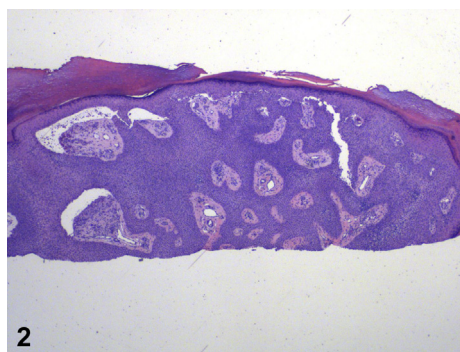


## Recurrent lesion on toe of young man



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**Key words:** adnexal neoplasm; benign; dermoscopy; eccrine poroma; sweat gland tumor.



A 32-year-old male with noncontributory medical history presented with a lesion on his left toe for 2 months with a history of occasional bleeding. The lesion was partially removed by urgent care 1 month previously but recurred. Physical examination found a 0.6-cm pink papule with a collarette on the left second plantar toe (Fig 1). Shave biopsy was performed with histology findings shown in Fig 2.

### Question 1. What is the diagnosis?

- A. Verruca vulgaris (VV)
- B. Pyogenic granuloma
- C. Hidradenoma
- D. Eccrine poroma (EP)
- E. Nodular melanoma

### Answers:

**A.** VV – Incorrect. The surface of this lesion is smooth rather than verrucous and the collarette is atypical for VV. Marked hyperkeratosis would be expected on biopsy.

**B.** Pyogenic granuloma – Incorrect. These more commonly occur in children with a history of epidermal trauma. Erosion and granulation tissue is not present in this lesion. Biopsy would have shown edematous stroma with capillary proliferation and leukocyte infiltration.<sup>1</sup>

**C.** Hidradenoma – Incorrect. Cells within a hidradenoma are much larger than the cuboidal cells seen in this biopsy. They also would contain much more cytoplasm and remain confined to the deeper dermis. Additionally, these lesions are more commonly located on the trunk, head, or extremities rather than the palms or soles.<sup>1,2</sup>

**D.** EP – Correct. Cuboid, or poroid, cells extend from the epidermis within a highly vascularized

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stroma and are lined by a well-demarcated edge of cuticular cells. Rare tubular structures are also common.<sup>3</sup>

**E.** Nodular melanoma – Incorrect. Nuclear atypia is not present. Other characteristic features are also absent such as elongated spindle cells, focal junctional nests, significant ulceration, and pigment variation.

**Question 2: Which of the following is NOT consistent with this diagnosis?**

- A.** Commonly present on acral surfaces
- B.** Positive carcinoembryonic antigen (CEA) staining
- C.** Proper treatment is excisional biopsy
- D.** Histopathologically similar to hidroacanthoma simplex
- E.** No malignant association

**Answers:**

**A.** Commonly present on acral surfaces – Incorrect. EPs are frequently found on the palms and soles of elderly patients, although a significant number of lesions have been documented on the abdomen, neck, and face.<sup>1-3</sup>

**B.** Positive CEA staining – Incorrect. Although immunohistochemistry staining is not required for diagnosis of EP and can be conflicting, CEA indicates the presence of apocrine or eccrine ducts. Other positive markers may include S-100, epithelial membrane antigen, and p16.<sup>4,5</sup>

**C.** Proper treatment is excisional biopsy – Incorrect. Excisional biopsy with either wide or narrow margins is generally indicated for histologic analysis of EP. Eccrine porocarcinoma (EPC) or borderline lesions may also include chemotherapy and lymphadectomy. Recurrence should raise concern for EPC.<sup>1,3,4</sup>

**D.** Histopathologically similar to hidroacanthoma simplex – Incorrect. A variation of a poroma, hidroacanthoma simplex, has cells within the epidermis only, unlike EP, which extends into the dermis. Other lesions considered acrospiromas are dermal duct tumors and poroid hidradenomas.<sup>2,5</sup>

**E.** No malignant association – Correct. EPCs arise from benign EP lesions, indicating significant risk of transformation. Anywhere from 10% to 100% of EPCs have been associated with prior EP.<sup>1,3</sup>

**Question 3. What would you expect to find on dermoscopy?**

- A.** Blue-grey ovoid nests with arborizing vessels
- B.** Bluish-white veil with surrounding dotted vessels
- C.** String of pearls
- D.** Black dots
- E.** Branched vessels with rounded endings and white interlacing areas

**Answers:**

**A.** Blue-grey ovoid nests with arborizing vessels – Incorrect. This would be characteristic of a basal cell carcinoma. The ovoid nests would correlate to basaloid cells at the dermoepidermal junction, which is not seen. It should be noted that there are reports of EP presenting with similar findings on dermoscopy, making diagnosis difficult.<sup>2</sup>

**B.** Bluish-white veil with surrounding dotted vessels – Incorrect. A bluish-white veil can indicate a number of findings on dermoscopy, such as a Spitz nevus or melanoma.

**C.** String of pearls – Incorrect. Dotted vessels in a serpiginous pattern are suggestive of clear cell acanthoma.

**D.** Black dots – Incorrect. Black dots represent thrombosed capillaries, which are commonly seen in VV.

**E.** Branched vessels with rounded endings and white interlacing areas – Correct. Although EP can have numerous findings on dermoscopy, branched vessels with rounded endings, milky red areas, and yellow structureless areas are features commonly seen on EPs on the hands and feet. The surrounding halo and polymorphous vessels are relatively sensitive for EP. Vessels are commonly in hairpin, coiled, or linear formations. Notably, necrosis en masse is not uncommon in EP and does not necessarily indicate an eccrine porocarcinoma.<sup>2,3</sup>

**Abbreviations used:**

- CEA: carcinoembryonic antigen
- EP: eccrine poroma
- EPC: eccrine porocarcinoma
- VV: verruca vulgaris

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