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Authors

Bloom, Bradley S
Kamino, Hideko
Hale, Christopher S
et al.

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Case Presentation

Collision tumor of eccrine poroma, seborrheic keratosis, and a viral wart

Bradley S. Bloom MD, Hideko Kamino MD, Christopher S. Hale MD, Shane A. Meehan MD, and Miriam Keltz Pomeranz MD

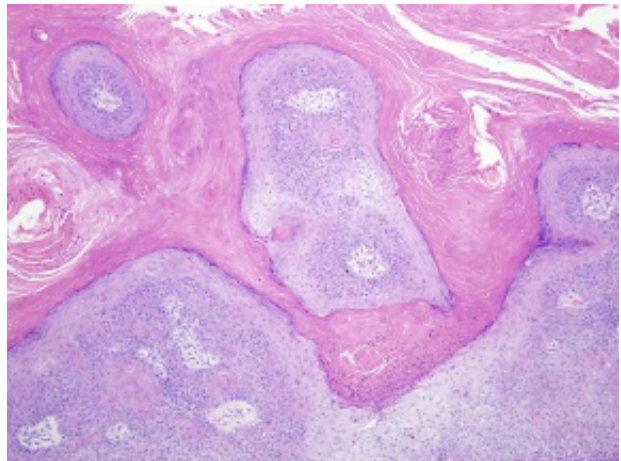
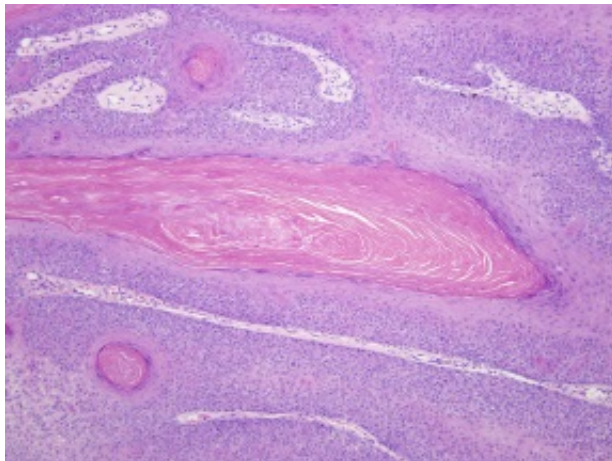
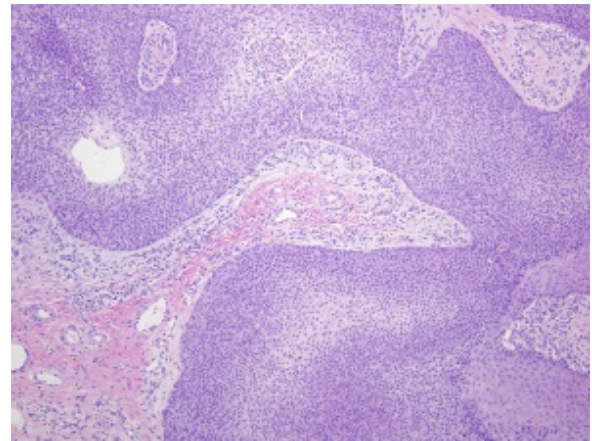
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Abstract

A 68-year-old woman presented for evaluation of a large, red-brown plaque on her left buttock with irregular borders and prominent overlying verrucous changes. The plaque had been present since childhood but over a three-year period had been enlarging with increasing nodularity and easy bleeding with trauma. Histopathologic examination demonstrated an enlarged papillated and polypoid heterogeneous lesion. In part of the specimen, there are bulbous aggregates of small squamous cells with foci of eccrine ductal differentiation. There are other areas with horn pseudocysts, hypergranulosis, and compact orthokeratosis with parakeratosis. There are scattered enlarged heavily pigmented melanocytes, some of which have long and thick dendrites. This collision tumor consisted of an eccrine poroma, a seborrheic keratosis, and a viral wart. The clinical and histopathologic features of collision tumors and poromas are reviewed.



Case synopsis

History: A 68-year-old woman presented to the Dermatology Clinic at Bellevue Hospital Center for evaluation of a plaque on her left buttock that had been present since childhood but over a three-year period had become increasingly nodular and would bleed when traumatized. The patient was unsure if it was present since birth. The overall diameter of the lesion had increased by approximately 10% over the past three years, which prompted her referral to dermatology. The patient denied any unintentional weight loss or family history of skin cancer.

Past medical history included hypertension, hyperlipidemia, and non-alcoholic steatohepatitis. Past surgical history included cholecystectomy over 20 years prior to presentation.

A large shave biopsy specimen was obtained from the central exophytic portion of the plaque on the left buttock.

Physical examination: On the left buttock, there was a 10-cm by 6.5-cm, red-brown plaque with irregular borders and prominent overlying verrucous changes. Exophytic papules and nodules with overlying hemorrhagic crust were noted within the lesion. On the abdomen, at the sites of surgical incision from the patient's prior cholecystectomy, there were large keloidal plaques.

Laboratory data: None.

Histopathology: There is an enlarged papillated and polypoid heterogeneous lesion. In part of the specimen, there are bulbous aggregates of small squamous cells with foci of eccrine ductal differentiation. There are other areas with horn pseudocysts, hypergranulosis, and compact orthokeratosis with parakeratosis. There are scattered enlarged heavily-pigmented melanocytes, some of which have long and thick dendrites. The lesion is crusted and associated with spongiosis and an infiltrate of neutrophils, plasma cells, and lymphocytes.

Discussion

Diagnosis: Collision tumor of eccrine poroma, seborrheic keratosis, and a viral wart.

Comment: The coexistence of multiple neoplasms within a single cutaneous specimen is unusual but not uncommon [1]. These lesions with multiple neoplasms have been referred to as collision or compound tumors [1, 2]. The associations of multiple neoplasms may reflect the involvement of related cell types or a similar pathogenic mechanism in some cases, whereas other associations may represent serendipitous juxtaposition [1]. In defining collision lesions, it is important to distinguish these collision tumors from hamartomas, which are benign proliferations of native cellular elements in an aberrant proportion. A hamartoma may be congenital and properly referred to as a nevus or may be acquired and present in a tumor-like fashion [3]. The distinction between hamartoma and neoplasm, however, may be blurred, particularly in the case of adnexal neoplasms.

The histopathologic examination of the biopsy specimen showed an enlarged, papillated, and polypoid heterogeneous lesion with features of an eccrine poroma, a pigmented seborrheic keratosis, and a viral wart. The term poroma refers to a group of benign adnexal neoplasms of either apocrine or eccrine lineage, with poroid (terminal ductal) differentiation [3-7]. Poromas clinically present as solitary papules, plaques, or nodules that may occur on any cutaneous surface [3, 8, 9]. The lesions are classically described on palmar and plantar skin, but the scalp also is a common site [3, 8, 9]. Although typically identified in adults, congenital and childhood onset has been described [8, 10, 11]. Pigmented poromas also have been reported with both clinical and histopathologic evidence of melanin [12, 13].

On histopathologic examination, poromas are characterized as circumscribed proliferations of compact cuboidal keratinocytes with small monomorphous nuclei and scant eosinophilic cytoplasm that extends into the dermis from the undersurface of the epidermis [3, 9]. Wholly intraepidermal variants are referred to as hidroacanthoma simplex, whereas wholly epidermal lesions are known as dermal-duct tumors [3, 9]. As described above, pigmented poromas have been described and demonstrate melanocyte colonization [11-13]. A number of hypotheses have been presented to explain melanocyte colonization of appendageal tumors.[14-16] It is possible that the melanocytes present in the current case represent colonization of the poroma rather than a pigmented seborrheic keratosis.

Treatment of poromas is optional given their benign nature. However, malignant transformation into porocarcinomas has been suggested by the long duration of some porocarcinomas [17, 18]. Porocarcinomas were first described by Pinkus, *et al.*, and subsequently four large series have been published [9, 19-23]. Clinically, porocarcinomas present as verrucous plaques or polypoid growths [23, 24]. The lesions may bleed with minor trauma and pigmented variants with melanocyte colonization have

been described [23-26]. Porocarcinomas have a predilection for older individuals and acral sites [27, 28]. These lesions require wide local excision or Mohs micrographic surgery [29].

The differential diagnosis for our patient's tumor includes an epidermal nevus with subsequent development of poromas within the lesion. Hamanaka, *et al.* have reported a case in which multiple malignant eccrine poromas have developed within a linear epidermal nevus [30].

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