

A Case with Unique Dermoscopic Findings: Collision of an Apocrine Gland Cyst and a Trichoblastoma

Keigo Ito^{1,2}, Shin-ichi Ansai^{1,2}, Azusa Ogita¹,
Hidenori Matsuda¹ and Hidehisa Saeki³

¹Division of Dermatology, Nippon Medical School Musashi Kosugi Hospital, Kanagawa, Japan

²Division of Dermatopathology, Nippon Medical School Musashi Kosugi Hospital, Kanagawa, Japan

³Department of Dermatology, Nippon Medical School, Tokyo, Japan

We report a case of a blue-black nodule on the left upper eyelid of a 77-year-old woman. Dermoscopic examination of the lesion revealed a purple or purple-red homogenous opaque area like that often observed in apocrine gland cysts and a yellow-whitish homogenous structure with arborizing vessels. After resection of the tumor, a final diagnosis of collision of an apocrine gland cyst and a trichoblastoma was made. We should note the possibility that trichoblastoma may exhibit a yellow-whitish homogenous structure in dermoscopy. (*J Nippon Med Sch* 2018; 85: 334–336)

Key words: dermoscopy, collision, apocrine gland cyst, trichoblastoma

Introduction

Dermoscopy is a valuable tool for diagnosis of various skin diseases, especially cutaneous neoplastic lesions, because it is a noninvasive technique and has improved diagnostic accuracy for those lesions. Therefore, dermoscopic findings have been reported for many cutaneous tumors, including melanocytic, mesenchymal, and epithelial tumors of the skin, and characteristic findings for those lesions have been revealed.

However, in some instances, several characteristic findings of different diseases were observed in the same lesion. Diagnosis by dermoscopy is confusing in such a situation¹. Here, we report a case of collision of an apocrine gland cyst and a trichoblastoma, which is a rare combination, with unique dermoscopic findings. We should always consider the possibility of collision when unique dermoscopic findings are exhibited.

Case Report

A 77-year-old woman visited our outpatient clinic complaining of a blue-black nodule on her left upper eyelid. She had been aware of the lesion since she was a young adult. Since then, the lesion had gradually enlarged. Physical examination at the first visit revealed a blue-

black nodule without tenderness and a yellow-whitish nodule on the upper portion of the lesion (**Fig. 1**). Dermoscopic examination revealed a purple or purple-red homogenous opaque area and yellow-whitish homogenous structure with arborizing vessels (**Fig. 2**). The patient did not have any notable prior medical problems and her laboratory results were normal. A clinical diagnosis of melanocytic nevus or basal cell carcinoma with milium was made. The lesion was totally resected under local anesthesia.

Histopathological examination revealed a cystic lesion and solid tumor cell nest on the dermis (**Fig. 3a** and **Fig. 4a**). The cystic lesion was a unilocular cyst lined by cuboidal cells with decapitation secretion, and cuboidal or elongated myoepithelial cells in the outer layer (**Fig. 3b**). The solid tumor cell nest was formed by basaloid epithelial cells with nuclear palisading at the periphery. In some areas, the tumor nest formed a concavity, and fibrillary collagen bundles and abundant numbers of fibroblasts with plump nuclei were observed within the concavity, closely resembling follicular papillae (**Fig. 4b**).

A final diagnosis of collision of an apocrine gland cyst and trichoblastoma was made based on those findings. There has been no recurrence for 10 months after resec-

Correspondence to Keigo Ito, MD, PhD, Division of Dermatology, Nippon Medical School Musashi Kosugi Hospital, 1–396 Kosugi-cho, Nakahara-ku, Kawasaki, Kanagawa 211–8533, Japan

E-mail: keigo-ito@nms.ac.jp

Journal Website (<http://www2.nms.ac.jp/jnms/>)



Fig. 1 Clinical findings of the case. A blue-black nodule and a yellow-whitish nodule (arrowhead) on the upper portion of the lesion.



Fig. 2 Dermoscopic findings of the case. A purple or purple-red homogenous opaque area and yellow-whitish homogenous structure with arborizing vessels (arrowhead).

tion.

Discussion

Apocrine gland cyst, also called apocrine hidrocystoma or apocrine cystadenoma, is a generic term for cystic lesions composed of apocrine epithelium and myoepithelial cells. Clinically, it is a relatively uncommon disease that is most frequently observed on eyelids². Histopathologically, the apocrine gland cyst exhibits unilocular or multilocular cysts lined by cuboidal or columnar cells with decapitation secretion and cuboidal or elongated myoepithelial cells in the outer layer. Micropapillae are sometimes formed by intraluminal proliferation of cells lining the cysts². The central lesion in our case was consistent with those findings.

Trichoblastomas are uncommon benign neoplasms

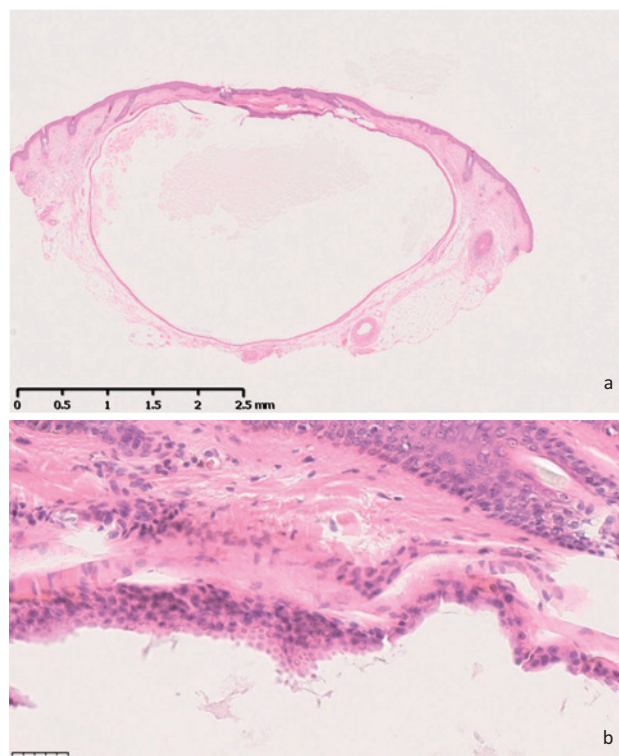


Fig. 3 Histopathological findings of the cystic lesion. A unilocular cyst (a) lined by cuboidal cells with decapitation secretion, and cuboidal or elongated myoepithelial cells in the outer layer. (b) (HE staining).

with follicular germinative cell differentiation of neoplastic cells. Tumor cell nests of trichoblastoma often resemble those of basal cell carcinoma because neoplastic cells of both basal cell carcinoma and trichoblastoma show the same differentiation³⁻⁵. In other words, trichoblastomas are benign counterparts of basal cell carcinomas. In our case, differentiation of neoplastic cells towards a follicular bulb and papillae was clearly observed; therefore, we made a diagnosis of trichoblastoma.

Only one report describing dermoscopic findings of an apocrine gland cyst in a case series has been published. Zaballo et al.⁶ reported the most frequently occurring dermoscopic features in apocrine hidrocystoma to be as follows: (i) A translucent-to-opaque, homogeneous area that occupies the whole lesion (100%). This homogeneous area was skin-colored in 31.8%, yellow in 31.8%, and blue in 22.7%. (ii) Vascular structures were identified in 81.8%, arborizing vessels in 68.2%, and linear-irregular vessels in 9.1%. (iii) Whitish structures were identified in 22.7%. The results of their study revealed that a homogeneous area that occupies the whole lesion and arborizing vessels was the most common dermoscopic pattern in apocrine hidrocystomas (68.2%). In our case, a purple or

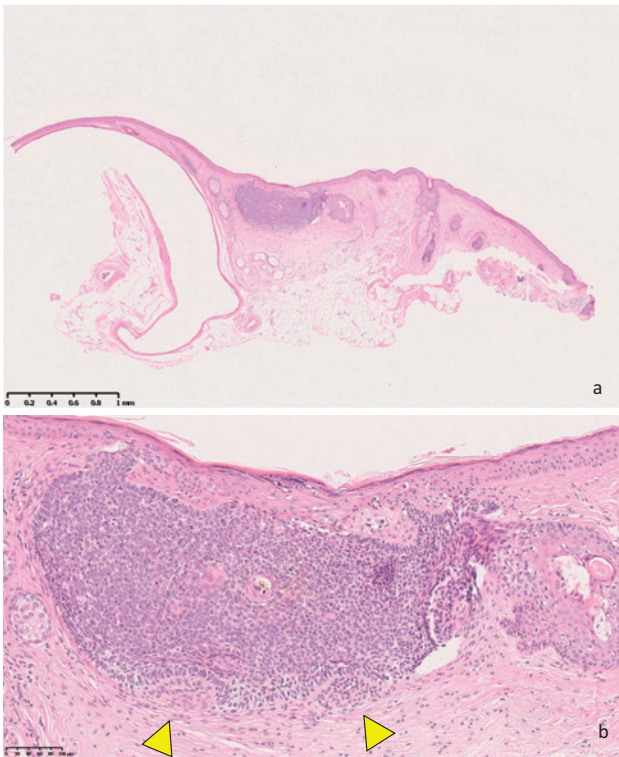


Fig. 4 Histopathological findings of the solid lesion besides the cystic lesion. (a) The lesion is formed by basaloid epithelial cells with nuclear palisading at the periphery. (b) In some areas, the tumor nest forms a concavity, and fibrillary collagen bundles and abundant numbers of fibroblasts with plump nuclei can be observed within the concavity. (arrowhead) (HE staining).

purple-red homogenous opaque area was observed and that finding coincided with their report.

There have been a small number of reports describing dermoscopic findings of trichoblastoma, whereas there have been many for basal cell carcinoma. Kitamura et al.⁷ reported a case of BCC and trichoblastoma occurring simultaneously in the same nevus sebaceus, including the differential dermoscopic features. Dermoscopy revealed that the lesion of basal cell carcinoma had 'multiple' black structures, and that of trichoblastoma showed a 'single' black structure without arborizing vessels. Ghigliotti et al. reported the dermoscopic features of 19 cases of solitary trichoblastoma and compared them with those of basal cell carcinoma⁸. The most striking dermoscopic difference between trichoblastoma and basal cell carcinoma was the presence of blue-grey globules and blue-grey ovoid nests that were found to be more frequent but not exclusive in basal cell carcinoma. Arborizing vessels were found in both neoplasms, with a

lower frequency in basal cell carcinoma. They concluded that histology remains the gold standard to differentiate trichoblastoma from basal cell carcinoma.

In our case, dermoscopy of the lesion of the trichoblastoma showed a yellow-whitish homogenous structure with arborizing vessels. Those findings were similar to those reported by Zaballos et al. for apocrine hidrocystoma⁶; therefore, judging only from the dermoscopic findings, the entire lesion could be thought to be an apocrine gland cyst. However, the region exhibiting the yellow-whitish homogenous structure with arborizing vessels was a trichoblastoma in our case. Arborizing vessels are characteristic features of trichoblastoma; however, a yellow-whitish homogenous structure has not been reported in trichoblastoma. We should note the possibility that trichoblastoma may show a yellow-whitish homogenous structure in dermoscopy.

Conflict of Interest: none

References

1. Ansai S, Ogita A, Matsuda H, Saeki H, Tanaka M: Collision of basal cell carcinoma and melanocytic nevus with unique dermoscopic findings. *J Dermatol* 2016; 43: 584–585.
2. Ansai S, Anan T, Fukumoto T, Saeki H: Tubulopapillary cystic adenoma with apocrine differentiation: A unifying concept for syringocystadenoma papilliferum, apocrine gland cyst, and tubular papillary adenoma. *Am J Dermatopathol* 2017; 39: 829–837.
3. Headington JT: Differentiating neoplasms of hair germ. *J Clin Pathol* 1970; 23: 464–471.
4. Ackerman AB, Reddy VB, Soyer P: Trichoblastoma. In *Neoplasms with follicular differentiation* (Ackerman AB, Reddy VB, Soyer P, eds), 2nd. 2001; pp 405–622, Ardor Scribendi, New York, NY, USA.
5. Ackerman AB, Reddy VB, Soyer P: Trichoblastic carcinoma. In *Neoplasms with follicular differentiation* (Ackerman AB, Reddy VB, Soyer P, eds), 2nd. 2001; pp 625–1006, Ardor Scribendi, New York, NY, USA.
6. Zaballos P, Bañuls J, Medina C, Salsench E, Serrano P, Guionnet N: Dermoscopy of apocrine hidrocystomas: a morphological study. *J Eur Acad Dermatol Venereol* 2014; 28: 378–381.
7. Kitamura S, Hata H, Imafuku K, Shimizu H: Basal cell carcinoma or trichoblastoma? Dermoscopic examination of black macules developing in the same nevus sebaceous. *Case Rep Oncol* 2016; 9: 143–147.
8. Ghigliotti G, De Col E, Parodi A, Bombonato C, Argenziano G: Trichoblastoma: is a clinical or dermoscopic diagnosis possible? *J Eur Acad Dermatol Venereol* 2014; 30: 1978–1980.

(Received, April 18, 2018)

(Accepted, June 11, 2018)